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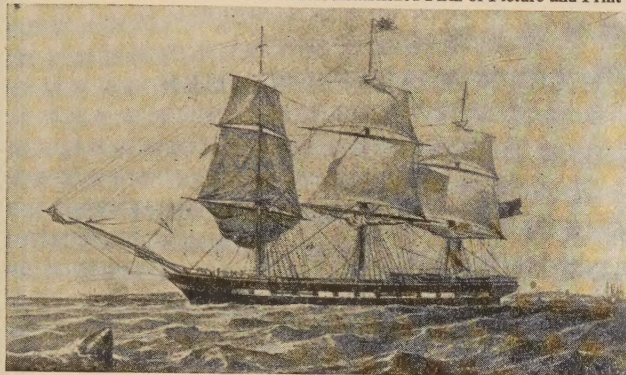
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COLLINGWOOD AND GANTEAUME: THE FRENCH OFFENSIVE IN THE MEDITERRANEAN, JANUARY TO APRIL 1808¹

By Piers Mackesy

PART I

(1)

TWICE the Mediterranean naval power of France was destroyed by Nelson; and the years of British supremacy which followed the Nile and Trafalgar battles were disturbed only by the irruption through the Straits of the enemy's Atlantic fleets: sorties which achieved little, brought no battles, and in the two best-known instances diminished the reputation of the British commanders. If Bruix had been brought to action in 1799, and Ganteaume in 1808, Keith and Collingwood might have been inscribed on the roll of the great British admirals. On the cruise of Bruix new light has recently been shed by the publication of the second volume of the Keith Papers, which show that much of the criticism of Keith was unjustified. But Ganteaume's operations and the failure to intercept him have never been fully explained; and Collingwood's name still lies under the criticism of Sir John Laughton and other historians for his inability to bring the enemy to action.

The news of the Peace of Tilsit had reached Collingwood off the Dardanelles in August 1807, while he was supporting Sir Arthur Paget's abortive negotiations with the Turks. The dangers of the new situation were at once apparent; and a few weeks later, on learning that Russia had ceded the Ionian Islands, and fearing that Admiral Siniavin's squadron at Corfu would be handed over to the French, he hastened back to the Central Mediterranean. His fears did not immediately materialize. The Russian squadron departed, some for the Baltic, and the least seaworthy to be laid up at Trieste; and the French troops in Corfu were soon reduced to impotence by a blockading squadron commanded by Captain Harvey of the *Standard* 64. At the end of the year Collingwood's main fleet of nine sail of the line was disposed for the protection of Sicily, half with Thornbrough at Palermo to watch the north and west against the squadrons in Toulon and Carthage, while Collingwood himself took station at Syracuse with the remainder to guard against an attack from the Adriatic.

¹ Adapted from a chapter of the Julian Corbett Prize Essay, 1952.

Though the danger did not appear as soon as Collingwood had feared, it was very real. Immediately after the peace, Napoleon had thrown his boundless energy into the maritime struggle with England; and he intended, before seizing his share in the projected partition of the Ottoman Empire, to challenge the British command of the Mediterranean by ejecting the British army from its base in Sicily. The island was the key to the Central Mediterranean. In British hands its granaries fed Malta, its harbours dominated the Italian coast and the narrow channel connecting the eastern to the western Mediterranean. Without it, the British troops and fleet would be confined to Malta, an island which lacked subsistence and fuel even for its own population. From Sicilian ports the French warships and privateers could prey on the trade route through the Sicilian Channel, and menace Egypt with an expedition which was the constant dread of British statesmen.

Napoleon had long desired the island. He had hoped to overrun it when the Bourbons were driven from Naples after Austerlitz; but General Reynier's defeat at Maida, and the renewal of the war in the north against Russia and Prussia, had ended his hopes of a quick success. The Peace of Tilsit revived them. He gave fresh orders to assemble an expedition at Toulon, inquired about the capacity of Taranto harbour, and talked of seizing Sardinia as a preliminary to the invasion of Sicily. Joseph Bonaparte at Naples was ordered to seize the fortresses of Scilla and Reggio, which commanded the Italian shore of the Straits of Messina, a necessary step before an invasion could be mounted on the Straits.¹

But as so often happened, Napoleon's orders to his Minister of Marine reflected hopes rather than possibilities. Even if the British fleet could be eluded, the British army at Messina was seventeen thousand strong, a formidable obstacle to successful invasion from the sea. Months passed before Napoleon saw an opportunity to realize his plans. It was in November 1807, that he learnt from Joseph that General Moore had sailed with a large force from Messina, leaving, it was believed, only three or four thousand British troops in the island.² At first an attack on the Ionian Islands seemed possible; but weeks went by, and it became certain that Moore's expedition had left the Mediterranean. The moment was ripe. On 12 December the Emperor gave orders for the Rochefort, Lorient and Brest squadrons to sail for Toulon. The Spaniards in Carthage were to join them; so that even if the squadron in Cadiz could not get out, there would still be a force of twenty-seven sail of the line in Toulon.³

¹ *Napoleon Corr.* 12,851, 12,878, 12,970, 13,109.

² Du Casse, *Mémoires et correspondance du roi Joseph*, Vol. iv, p. 54.

³ *Napoleon Corr.* 13,387: 18 French (Brest 7, Lorient 2, Rochefort 5, Toulon 4 or 5); 2 Russians (stragglers from Siniavin's squadron, still at Elba); and 7 Spaniards.

For once a part of this plan of concentration was achieved. The Brest fleet was held close in port by Lord Gardner, and Rosily could not elude Purvis off Cadiz; but on 17 January Rear-Admiral Allemand found Rochefort uncovered. Putting to sea with five sail of the line, a frigate and a corvette,¹ Allemand chased off the cruisers which Admiral Strachan had left to watch the port, and steered southwards for Gibraltar. When the news of his departure reached Paris, Admiral Ganteaume was ordered to hoist his flag at Toulon and sail the moment Allemand joined him. On 24 January the Emperor sent detailed instructions for the invasion of Sicily to Joseph at Naples.²

The plan was a landing near Messina. In the middle of February Ganteaume's combined fleet should embark nine thousand troops at Naples and land them on the Straits. Simultaneously, General Reynier would throw an equal force across from Calabria in small vessels. For the first forty-eight hours the fleet could protect the passage, and would then regain the open sea. By that time new batteries at the Faro, crossing fires with those on the Calabrian shore, would close the Straits to the British navy, 'making the sea vanish'. Once ashore, the French army would meet with little resistance from the small British force which remained in Sicily.³

The plan was a sound one. Though Napoleon had underestimated the British force, which numbered some nine thousand effective infantry commanded by General Sherbrooke, Moore himself believed that once a strong French force was ashore, Sherbrooke's only course would be to withdraw into the fortresses and make a favourable capitulation. 'If the enemy once land, the game is up.'⁴ Afterwards, the British cruisers would be unable to close the mile of water on which Reynier's communications depended, with its swift current and commanding batteries, and with the long nights to cloak the movement of supplies. Both Lord Collingwood and Sir Sidney Smith believed, with some exaggeration, that Scilla could command the Narrows;⁵ and a second battery on the opposite shore would prevent the frigates from keeping station on Reynier's supply line. The main hazard of the operation was the British squadron divided between Palermo and Syracuse, numbering together about nine ships of the line; a sufficient force to overwhelm Ganteaume's ten ships with their inexperienced crews. But in the Straits Ganteaume would command their point of junction, and a well-timed attack might achieve its object before the British admirals could

¹ A sixth ship of the line left Rochefort, but put back after being damaged by gales—a familiar story in the French navy of the time (James, Vol. iv, p. 234).

² *Napoleon Corr.* 13,480, 13,483.

³ *Napoleon Corr.* 13,480.

⁴ *Paget Papers*, Vol. II, p. 355.

⁵ Adm. 1/412, no. 292 encl.; Adm. 1/414, no. 18.

reach the scene or concert their counterstroke. Everything depended on surprise. 'Secret et secret!'

Yet Napoleon's orders lacked the precision which he would have demanded of a purely military plan. His dates were confused. He expected the combined squadrons to appear off Naples on about 15 February, yet elsewhere he wrote that by the 14th Allemand would not have joined Ganteaume at Toulon: if the first date was merely a device to hasten his dilatory brother's preparations, it was a very transparent one. At this late hour he inquired about the capacity of the Neapolitan harbours to shelter his squadrons. He even required assurances about the assumptions on which the whole plan was based, the existence of sheltered anchorages in that part of Sicily, and the intersection of fire from the batteries at Scilla and the Faro. He had written emphatically that the operation turned on crossing the Straits, and that a direct attack on Palermo would be too dangerous; yet a postscript added that if no sheltered landing-places existed between Messina and Catania, the expedition would have to make for Palermo, taking the very course he had condemned. In that event, more troops would have to be embarked by the fleet, and Joseph must prepare transports for an additional four thousand men.¹

Nevertheless, if there were hazards and uncertainties, the stakes were high. But within a week Napoleon had overturned his plans and abandoned the design against Sicily. On the day after he had unfolded his detailed plans to Joseph, he gave the Minister of Marine the first indication that the fleet might be diverted to Corfu, and by 29 January Corfu, not Sicily, was Ganteaume's destination. Taking three transports, he would deliver to the island artillery, munitions, artificers and troops, and protect the convoys which were waiting in the heel of Italy to carry provisions and reinforcements to General Berthier.²

This was the death-blow to the hope of conquering Sicily. A week later, it is true, the Emperor reverted to the Sicilian plan, 'ce qui change la face de la Méditerranée.' But now he declared that Ganteaume could favour Reynier's crossing as he returned from Corfu: 'vous devez regarder Corfou comme plus important que la Sicile'. The embarkation of troops at Naples was abandoned, and Napoleon declared that eight or ten thousand men (the most that could be embarked in the Straits) would be enough to capture the island.³ The new plan could not be executed, and Napoleon must have known it. Eight thousand men were not enough for an expedition where failure would mean the loss of the entire force; and in replenishing Corfu Ganteaume would sacrifice his essential advantage of surprise. The Emperor

¹ *Napoleon Corr.* 13,480, 13,491.

³ *Napoleon Corr.* 13,483, 13,504, 13,511.

² *Napoleon Corr.* 13,534.

may still have hoped that some stroke of fortune would put Sicily in his hands, but his real object was now to deceive the British admirals by maintaining the threat to Messina. Joseph was ordered to hasten the capture of Scilla, and press the preparations for invasion as though no change had been made in the original plan. 'Ce maudit rocher de Scilla me contrarie dans toutes mes conceptions.'¹ Joseph loyally obeyed.

(2)

At this point it is worth inquiring whether Napoleon had intended the threat to Sicily as a deception from the moment when he revived his naval projects after Tilsit. How the British fleet could be hampered by a threat to its base is well illustrated by the pursuit of Bruix in 1799, when Spanish preparations to invade Minorca had drawn Keith back to Mahon at the moment when he was about to fall in with the enemy. Napoleon himself expressed a parallel idea to Joseph in November 1807, in urging him to capture Scilla and Reggio. The British possession of those strong points on the Straits, he wrote, secured Sicily and made a large proportion of the garrison disposable for operations outside the island.² He was then thinking in military terms, and the departure of Moore's expedition at about that time illustrated the truth of his observation. The absence of an adequate garrison, after Moore's departure, however, threw an additional responsibility on the fleet; and it is conceivable that Napoleon's anxiety to threaten Sicily rose from a desire to deceive Collingwood and tie his squadrons to the defence of the island while Ganteaume was at sea.

Yet so important was the seizure of Sicily as a positive step towards the defeat of England that Napoleon would surely have preferred it to the negative act of replenishing a fortress already in his possession. The occasion of the order of 12 December, which first named Sicily as the fleet's destination, was the withdrawal of British troops from the Mediterranean, a circumstance which actually reduced the danger to Corfu, while it made Sicily vulnerable. Nor can the operation order, which Napoleon despatched to Joseph while the Rochefort squadron was at sea, lightly be dismissed as a deception; for it shows a care and detail which Napoleon would not uselessly have lavished on the very eve of unmasking his real intentions to the recipient. It may be that Napoleon always had the two alternatives in his mind: but to believe that the Sicilian operation was never his main object is to reject the probable for the fantastic.

¹ *Napoleon Corr.* 13,537.

² Du Casse, *Les Rois Frères*, p. 24 (12 November 1807, Napoleon to Joseph). For the effect on Keith's operations of the weakness of Minorca, see C. T. Atkinson in *Journal of the Society for Army Historical Research*, 1953.

Why, then, if Napoleon was in earnest about Sicily, did he change his plan? No fresh evidence had appeared of the difficulty of seizing Sicily. On the contrary, Reynier had overcome one of the main obstacles, for in spite of the bad roads and the British blockade of the Calabrian coast, his artillery had been brought within reach of Scilla. It is clear from Napoleon's correspondence at the end of January that it was not his doubts about Sicily which increased, but his anxiety for Corfu. He feared that a British attack would find the garrison inadequate in numbers, provisions and armament. It was on the 25th that he first mentioned Corfu to Decrès. The next day he expressed his impatience to hear that a regiment had reached the island from Naples; inquired about the state of the batteries protecting the anchorage at Brindisi; and ordered Marmont in Dalmatia to be ready to march across Albania to the relief of Corfu in the event of a British attack.¹ On the 29th his decision was firm. He announced to the Governor of the Seven Islands that Ganteaume would bring him men, ordnance and tools, warning him to be ready for an attack by 1 April. Any commander who capitulated before the last rations were consumed and the garrison driven into its last retrenchments, would be shot.² These letters show that Napoleon was not merely taking a convenient opportunity to replenish the fortress. He was reacting to a danger which was vivid in his own mind.

Yet there was no new reason to fear for Corfu. British cruisers had been intercepting the island's supplies for the past four months; and by the end of December Napoleon had known that the sailing of convoys from Italy had been suspended.³ Subsequent letters from Naples added nothing to his knowledge of the difficulties.⁴ Nor was any British expedition against the island imminent. A force commanded by General Spencer had sailed from England to ensure the safety of the Portuguese fleet at Lisbon, with eventual orders to go to Sicily; but its numbers would not replace Moore's veterans, and its entire preoccupation if it reached the Mediterranean would be the defence of Sicily. And if Sicily could be invaded before Spencer's arrival, the British would have anxieties enough to keep them away from Corfu.⁵

¹ *Napoleon Corr.* 13,489, 13,491.

² *Napoleon Corr.* 13,504.

³ *Joseph Corr.* Vol. iv, p. 82.

⁴ Vandal argues that Joseph's letters of 12-23 January, combined with the realization that though the bulk of the British forces had left the Mediterranean, their cruisers still remained to blockade Corfu, produced the Emperor's resolution to send Ganteaume to its relief. But Joseph's letters did not reveal a new situation; and Napoleon had never imagined that the British navy had left the Mediterranean, where of course it remained in full strength. See Vandal, *Napoléon et Alexandre*, 1^{re}, Vol. 1, pp. 254-5.

⁵ It is true that in December the British cabinet had discussed an attack on Corfu, in the event of their orders miscarrying so that both Moore's and Spencer's forces found themselves in the Mediterranean; but the prospect of an additional defensive commitment aroused no enthusiasm,

In fact, Napoleon's fear on this score was unfounded, but not new: a month before his resolution to send Ganteaume to Sicily, he had opened negotiations with the Porte to enable Marmont to cross Albanian territory in an emergency.¹

It was, then, something other than the appearance of an immediate danger which dictated Ganteaume's final destination. Napoleon's interest in Corfu had suddenly been stimulated. The hints which he had thrown out in the previous October, of an ulterior design based on the possession of Corfu² had died away in face of the British blockade. 'Corfu est tellement bloquée,' he had written to Eugène Beauharnais in December, 'que je pense très-inutile d'y rien faire passer'. Now, at the moment when he ordered the fleet to the Ionian Islands, his tone changed again. 'Dans la situation actuelle de l'Europe, le plus grand malheur qui puisse m'arriver est la perte de Corfou.' 'Corfou est tellement important pour moi que sa perte porterait un coup funeste à mes projets.'³ For the command of the Adriatic, the island had no value to France: British warships blockaded Venice after the fall of Corfu as effectively as they had done before. Its importance to Napoleon lay in the east. As Capri in British hands bridled the Gulf of Naples, so Corfu would bridle the Gulf of Taranto and the Italian ports where an expedition to the Morea or Egypt would assemble. In its capacious anchorage a squadron could ride in safety awaiting the summons of its frigates off the enemy ports: this was what Napoleon meant when he told Joseph that its loss would close the mouth of the Adriatic. In addition the Ionian Islands provided him with an entry to Albania and Greece, Corfu and Santa Maura, the two islands garrisoned by French troops, protected the coastal shipping in their narrow channels, and formed a *place d'armes* for military intervention in European Turkey; and the town of Parga, also garrisoned by Frenchmen, was a bridgehead on the mainland. The possibility of a double advance into the Turkish Empire from Dalmatia and Corfu had been in Napoleon's mind since the time of Tilsit.⁴

If Napoleon did indeed change his mind in the last week of January about Ganteaume's destination, something must have occurred to turn his interests eastwards. Vandal suggests that the British speech from the throne, breathing war, combined with warnings from Saint Petersburg about Alexander's eastern ambitions, awoke Napoleon to the possibility of a great stroke in the east, simultaneously destroying the British empire in

and Moore's arrival in England on 29 December put an end to the question (*Castlereagh Corr.* Vol. VIII, pp. 96, 159).

¹ *Marmont Memoirs*, Vol. III, p. 111.

² *Napoleon Corr.* 13,223.

³ *Napoleon Corr.* 13,537 (7 February), 13,540 (8 February).

⁴ Dumas, *Précis Militaire*, Vol. XIX, pp. 340-2 (8 July 1807, Berthier to Marmont).

India and solving the Turkish question which threatened to undermine the Tilsit alliance.¹ Yet the same author believed that Napoleon's object in proposing an eastern expedition to Alexander at this time was not to precipitate a solution of the eastern question, but to postpone it until he was ready to take his share of the spoils. The two arguments conflict. The natural consequence of hostility to Britain would have been to strike where the damage would be most immediate and telling—in Sicily and Spain. Success here, challenging the British command of the Mediterranean, would have been the first step towards closing the Levant to their armies, and securing the French communications with Asia. An overland expedition towards India, in the light of General Gardane's reports of the barriers of desert and mountains, would have been long in preparation and doubtful in the issue. To sacrifice the hope of gaining Sicily for the sake of a base for such remote schemes was no answer to the British challenge.

Indeed, the true reason for Napoleon's change of intention seems to have been, not the speech from the throne, but the despatches from Saint Petersburg which arrived a week earlier on 18 January. The Tilsit alliance had reached a crisis. The Tsar was dissatisfied with Napoleon's policy in two areas of vital importance to Russia: in Poland where the continued presence of French troops alarmed him for the political and social security of Poland; and in Turkey, where the rewards which he had expected for the sacrifices of Tilsit were being withheld.² The despatches made it clear that it might no longer be possible to delay the partition of the Ottoman Empire. An immediate crisis in the east was the last thing Napoleon desired; yet Alexander could not afford to renounce his oriental ambitions, and must be assured of the advantages of continuing the French alliance. On the 22nd Napoleon discussed with Metternich the possibility that Russia would force the partition of Turkey as the price of her support. On the 29th, the date of his letters to Marmont and the Governor of Corfu, he asked his ambassador in Saint Petersburg how long Russian opinion could be satisfied with vague promises. And on 2 February, Napoleon made his famous proposal to Alexander for a great expedition through Constantinople to India, and a Russian attack on Sweden.³ The pretended occasion was the British speech from the throne; the real motive was to satisfy Alexander until the summer by dangling before him the bait of Stockholm and Asiatic conquests.

But the attempt to win time might fail. At any moment intervention by Russia might dissolve the Ottoman Empire into the anarchy of its component pashaliks and peoples; an anarchy in which the powers must seize what they could. From Corfu, France could stake her claims in Albania and

¹ Vandal, *op. cit.* Vol. 1, pp. 262-4.

² *Ibid.* Vol. 1, pp. 203-11, 216-19.

³ *Ibid.* Vol. 1, pp. 234, 238.

Greece, open a road towards Salonica and the Dardanelles, and halt the Russian advance into the Aegean. Egypt itself might be secured; for the British army, having abandoned Alexandria in the previous September, was in no state to return there. To secure Corfu did not herald an offensive stroke against the British empire: it was a defensive precaution against untoward events in the east. The new plan for Ganteaume sacrificed an offensive opportunity of the first importance to a defensive measure imposed by the British blockade of Corfu and the uncertain views of Alexander. It was a classical example of how the best defence of vital points may be to assail the enemy's, as the frigates in the Straits of Otranto were doing; and of how the threat to an object vital to the enemy may force his fleet to sea, and break a naval stalemate which favours the weaker force.

(3)

At Messina all had been in alarm since the beginning of the year: all, that is to say, except the Sicilian Court and people. The Court, said Lord Collingwood, viewed the French threat with perfect indifference; and the people's intercourse with the enemy had become so regular, under the guise of little trading ventures, that the British General had issued a prohibition on boats leaving the shore without a licence—a decree which in due course evoked the indignation of certain merchants of Leeds, in England.¹

The Sicilian forces in the island consisted of some six thousand troops of the worst description. The British commander, General Sherbrooke, with his headquarters at Messina, had about nine thousand infantry, of which more than a third were foreigners: a larger force than the enemy knew, but when garrisons had been found for the fortresses, the disposable British force would be pitifully small to meet the army Napoleon had allotted for the conquest.²

Sherbrooke's ability to maintain a foothold on the far side of the Straits depended on preventing the enemy from bringing up cannon by sea. The masonry of the fortresses of Scilla and Reggio had been ruined by the earthquake of 1783, and weakened again by the British bombardment in 1806; and Joseph had long been confident that they could not be held against artillery.³ But it was impossible to bring up heavy cannon from Naples across two hundred miles of rough mountain tracks. Since December Reynier had been pushing forward energetically, cutting the last section of a new artillery

1 Adm. 1/414, nos. 18, 287.

2 Maurice, *Diary of Sir John Moore*, Vol. II, p. 188; W.O. 17/1932.

3 *Joseph Corr.* Vol. III, p. 178.

road in the toe of the peninsula, to link the port of Pizzo with the Straits. A British cruiser-force was based on Messina to intercept his sea-communications, with one sloop permanently stationed in the Straits, three more watching the coastline as far as the Bay of Naples, and a fifth on the eastern coast of Calabria to intercept cannon and stores in the Gulf of Taranto.¹ But in the winter weather these measures were proving unable to prevent the enemy from bringing up his equipment. The *Kingfisher* sloop at Capri was blown off the coast for several days, and Joseph made use of the opportunity to pass several convoys of ordnance and stores from Naples to Pizzo, whence thirty miles of inland road led to Reynier's magazines.² By the middle of January Reynier's Chief Engineer had assembled a battering train within reach of Scilla and Reggio. It was not large—two 24-pounders, a 16-pounder, four 12-pounders and some smaller pieces—but it was enough for the walls of those battered forts.³ On 3 February the Sicilian garrison of Reggio surrendered without awaiting the bombardment, adding nine cannon to the enemy's train.⁴

Sicily's first line of defence, the blockade of the Calabrian coast, had been evaded; and the fall of the second, the commanding fort of Scilla, could not be long delayed against the formidable battery which Reynier now possessed. A naval disaster in the Straits had added to the enemy's artillery.

On 30 January four Sicilian gunboats were close to the steep Calabrian shore of the Straits, to protect two transports standing by to assist the garrison of Reggio. A company of French voltigeurs and a few grenadiers came down to the shore with some light field pieces and opened fire. A gale was blowing, and the surf breaking as far out as the gunboats, which could neither bring their guns to bear nor stand off from the shore. The transports had seen their plight, and their masters proposed to take off their crews and scuttle the vessels; but the French had opened fire with a large field-gun from a house, and at half-past two in the afternoon several more field-pieces suddenly opened from the same building, driving off the transports, one, the *William*, being in a sinking condition with four and a half feet of water in her hold. When darkness fell, the French infantry boarded the gunboats.

General Sherbrooke had seen the gunboats' difficulties from the opposite shore. Two sloops, the *Delight* and *Bittern*, lay in Messina harbour. Captain Handfield weighed instantly in the *Delight*, and outside the harbour he was joined by Captain Seccombe, the Senior Naval Officer, who came on board from his barge. The *Delight* raced across the channel to the rescue.

Captain Downe of the *Bittern* followed. At six o'clock, as darkness set in,

¹ Add. MSS. 14,276, ff. 60, 68.

² W.O. 1/306, 8 January, Sherbrooke to Castlereagh.

³ *Joseph Corr.* Vol. iv, pp. 126-7.

⁴ *Joseph Corr.* Vol. iv, pp. 242.

he reached the opposite shore, where it was blowing so hard that he was forced to take in the topgallant sails, close reef the topsails, and heave to. At seven the boat which he had sent to the *Delight* for orders returned with the news that in wearing she had gone ashore head on. The *Bittern* hastened to her assistance, but the wind was dead on shore, and nothing could be done. At half past seven the enemy opened fire with musketry and cannon. Nothing could be seen from the *Bittern* in the darkness and rain; but after a fight of two hours, in which Handfield was killed and Seccombe mortally wounded, the French were masters of the *Delight*. Some survivors of the crew reached the *Bittern* in the ships' boats.

The enemy had already taken possession of the gunboats' long 24-pounders: it was imperative to prevent them from obtaining the *Delight's* guns. All night the *Bittern* stood by, vainly trying to throw on board the carcasses which had been sent across from Messina for the purpose, but she was unable to keep broadside on, and it was daylight before Downe could send his boats to burn the wreck. By then it was too late. Her two 8-pounders and sixteen 24-pounder carronades had been added to Reynier's resources.¹

The fate of Scilla was now certain. The British garrison had been invested since the first day of the year. On 11 February Reynier's newly acquired artillery opened fire; in three days all the British guns were dismounted and a breach began to appear in one of the bastions. Since the bombardment began, the weather had prevented the British ships and gunboats from supporting the fortress, and the French were in high hopes that the rough seas would prevent the garrison's escape.² But on the 17th there was a lull. All was ready. Under Captain Trollope of the *Electra* sloop, the boats of the transports ran across protected by the warships' launches. On the seaward face of the fort there was a stairway cut in the rock, which the French had tried and failed to destroy. Down these steps the three companies of the garrison filed, to embark under fire from the French infantry and field-pieces lining the shore; and the evacuation was accomplished at the cost of one seaman killed and ten wounded.³

¹ This account is based on Adm. 1/414, nos. 25 and 35, which enclose the accounts of Captain Downe and the masters of the transports; and on *Joseph Corr.* Vol. iv, pp. 133, 134, 142. Bunbury (*Military Transactions*) differs in certain respects. He places the surrender of the gunboats in the morning, saying that they put out from Messina with the intention of deserting; he states that Handfield was killed and two-thirds of his crew put out of action before the *Delight* went ashore, and that she was burnt the same day. Though he wrote of certain particulars from first-hand knowledge, having watched the gunboats with General Sherbrooke, he was relying on memory many years later, and could not have seen clearly the details of the events on the far side of the Straits.

² *Joseph Corr.* Vol. iv, p. 157.

³ W.O. 1/306, 23 February, Sherbrooke to Castlereagh.

Joseph's preparations were now complete. A couple of miles of water was the only obstacle between Sicily and the Army of Naples. Nine thousand troops lined the Straits, with enough small craft for the crossing, and another ten thousand at Naples awaited the fleet from Toulon. The captured ordnance was ranged in batteries at Scilla and the Pezzo to cross fires with the projected battery at the Faro.¹ Already the British were finding difficulty in navigating the Straits, and communication with Messina from the north had to be arranged overland from Milazzo.² With a fair wind ships could generally pass in safety; but beating through the Straits, with a current which set permanently towards the Calabrian shore, they came under a formidable fire from the battery on the Pezzo.³

But the whole naval force of Joseph's kingdom was a frigate, a corvette, a brigantine and the fifty gunboats which protected his convoys, while in Messina harbour there now appeared the seventy-four gun ship *Montagu*, commanded by Captain Otway, with four cruisers to bar the passage.⁴ Against this opposition Joseph could attempt nothing without the promised naval support from France. His army was ready. Away to the north, in the Bay of Naples, were anchorages armed to shelter twenty-five sail of the line. Only Ganteaume was lacking. 'Je me tiens prêt dans toutes les hypothèses,' wrote Joseph.⁵

¹ *Joseph Corr.* Vol. IV, pp. 124, 126-7, 146, 157, 163.

² Add. MSS. 14,276, f. 86.

³ W.O. 1/306, 25 May, Stuart to Castlereagh; Adm. 1/412, no. 192 encl.

⁴ *Joseph Corr.* Vol. IV, p. 124; Add. MSS. 14,276, f. 75.

⁵ *Joseph Corr.* Vol. IV, pp. 139, 142.

CHARLES ALGERNON PARSONS

By J. E. de Courcy Ireland

CHARLES PARSONS was one of the last as he was one of the ablest representatives of the era of *laissez-faire* industrialism. He combined in his person and in his activities the inventor, the technician, the research-worker and the business executive. Since his time the growth in the size and complexity of industrial undertakings, which his life's work hastened, and a succession of social and political changes, have made it difficult for one man ever again to play so fully and successfully so many different parts.

In the period when Parsons was at Dublin University, and later at Cambridge, certain problems were confronting the world of industry which urgently demanded solution. The Industrial Revolution, which had made possible, and then necessary, the extraordinary careers of James Watt and George Stephenson, and had been so deeply transformed by them, had developed to a point where a new technical revolution was essential if it was to continue. Two needs had to be met. Following a long period of extensive and successful researches in many lands into the nature and possibilities of electricity, a method had to be found of generating electric power in quantity and effectively distributing it. And means had to be discovered for the faster and cheaper movement by water of the ever growing mass of products being turned out by a rapidly increasing number of factories. The answer to the two problems was the steam turbine, which continues, now a hundred years after the birth of the great inventor, to drive the world's greatest and best-known ships and to provide, for example, even in a country so well endowed with water-power as France, nearly 20,000 million units of electricity annually, or more than a third of the total national production of electric power. And, though great credit certainly belongs to other engineers who were his contemporaries, above all perhaps to the Frenchman Auguste Rateau, nine years his junior, there is no doubt that it was to Parsons above all others that the successful development of the steam turbine was due.

Parsons was interested in every aspect of engineering and in many branches of science. He spent large sums of money on an abortive project for the manufacture of diamonds, the very failure of which made useful additions to scientific knowledge. He was the perfecter of the searchlight, and his interest in optics was such that as soon as he was able to establish his own

engineering firm (in 1889), he included in it a mirror department. This department was greatly expanded during the first World War, and later Parsons acquired a separate factory for the manufacture of parts for telescopes. He did a great deal of work for Sir Horace Grubb, under whose supervision vital parts for submarine periscopes were manufactured throughout the 1914-18 war for the British Admiralty, in Dublin.

Parsons was also interested in the possibility of utilizing the great heat of the interior of the earth for industrial purposes, and he made a profound study of geology in the course of his researches into this subject. He was consulted by leading engineers and scientists, and by governments, on a wide variety of technical subjects. His biographer, Rollo Appleyard, describes how the British Government consulted him during the first World War about problems connected with the flight of shells, and the pains that he went to, as was his unvaried custom, to find the theoretical and practical replies to the questions posed to him.

He experimented with model flying machines, with the manufacture of microphones, with rocket-propelled torpedoes, and, when the success of his marine steam turbine created a series of new problems for the naval architect, he built the first closed circuit water-tunnel for investigating the effect of cavitation on ships' propellers.

When Parsons died he was working on a plan for the construction of a 400-inch telescope reflector and developing new methods for the artificial manufacture of diamonds. Ideas of his are in everyday use in the aircraft industry, which has grown so greatly since his death in 1931. The research organization, which sprang from the great Tyneside engineering establishment founded by him, is at present engaged in research into questions of marine and aerial propulsion which are likely to revolutionize transport within the next hundred years.

Charles Parsons was born on 13 June 1854, the son of the third Earl of Rosse, the famous astronomer. The Crimean War was in progress at the time, and on the day before his birth his father wrote to Sir John Burgoyne, Chief of the Engineering Department of the British Army, about the possibility of constructing a virtually unsinkable steam warship. The French were just about to bring into service the iron floating batteries which under Admiral Bruat did a great deal to secure the defeat of the Russians at Sebastopol; five years later they commissioned the first ironclad warship, the *Gloire*, and less than ten years later, in Hampton Roads, the U.S.S. *Monitor* went into action against a secessionist naval force and opened up the age of ironclad sea warfare. But it was the youngster about to be born who did more than any single man to alter the character of naval warfare.

Charles Parsons spent his boyhood at Birr Castle, Co. Offaly. He was a

lucky boy, for there was all around him almost everything that could be wanted to stimulate inventiveness and the spirit of research. His father not only encouraged him to use the Castle's splendid library, but interested him from an early age in ships and other practical things.

Parsons was given, in the scientist Sir Robert Ball, exactly the kind of tutor to develop still further his scientific interests. It was with these already beginning to flower that he entered Trinity College, Dublin in 1871. He won a prize in entrance for proficiency in German, which he had picked up during travels on the Continent.

The course of studies at the University at that time is rather horrifying to read—a crammer's paradise, likely to dull the spirit of all but the most enthusiastic, and apparently designed with no thought of stimulating the student to think for himself. There is, moreover, little differentiation made between one branch of studies and another, and everybody had to labour long and hard at Classics and Mathematics. It was a system, I think, which could really benefit only the really brilliant, but Parsons was one of those: though he did not care for Greek Testament, nor, indeed, for the sermons and services in the College Chapel.

In his second year at Trinity, Parsons won a Mathematics prize. He was weak in Greek, but for Mathematics he had genius. After two years at Trinity he went on to St John's College, Cambridge, and passed out as eleventh wrangler in the Mathematical tripos of 1877. He seems to have made a very great impression on his fellow students and on his tutors in both universities. At Cambridge he won distinction at rowing, and all the time his interests were becoming more practical and were concerned with the application of the knowledge he was accumulating to the engineering problems of his time.

After leaving Cambridge, he became an apprentice at the Elswick Works at Newcastle upon Tyne to Sir William Armstrong, 'the cleverest mechanical engineer I have ever known'. Becoming a partner of Clarke, Chapman and Co. at Gateshead in 1884 (he had the good fortune, unlike so many other inventors, to be rich) he began to study the problem of the transmission of electric power over long distances. At the time, the gas engine was believed likely to displace steam as a prime mover, and steam engines were being condemned by the learned to the museum. Parsons, however, to use his own words, 'determined to attack the problem of the steam turbine and of a very high-speed dynamo and alternator to be directly driven by it'.

He was convinced that an economic rotary steam engine could be designed, something quite different from the triple- and quadruple-expansion engine then the latest word in steam engines, and he was determined to apply the very great theoretical knowledge he had acquired of thermo-

dynamics. Moreover, and this perhaps was the Irish in him, Parsons was quite certain that he could do what the acknowledged authorities considered impossible. He was always like that. At all events, his machines were working well by 1886 and had begun to be a success by 1894, when one of his turbines attracted wide public attention by saving the Metropolitan Electric Supply Company from shutting down its main London generating station owing to the nuisance caused by the reciprocating engines previously in use. By 1900 he was building generating sets of 1000 kilowatt capacity, and in 1912 he undertook to build a turbo-alternator with an output of 25,000 kilowatts.

His success came from his solution of the problem of the turbine blade's tip having to move with a velocity greater than the speed of sound to extract the energy from high-pressure steam freely expanding. This was done by causing the steam to fall in pressure in a series of steps.

From 1884 on, Parsons patented invention after invention, and the next product of his genius was the Parsons marine steam turbine.

Some idea of the effect upon shipping of the revolution in marine engineering, and so necessarily soon in design also, of which Parsons was the primary, though not the only champion, can be had from examination of a few facts.

When Parsons began work on the marine turbine, more than half the world's cargoes was still carried in sailing ships. The steamship with a triple-expansion engine was only slowly ousting the iron four-masted barque from the main cargo routes, and the marine steam engine was not unnaturally considered extravagant, as well as in fact being wasteful, when fuel consumption per draft horse-power hour was about ten times what it is today, when engineers are still dissatisfied. In 1854, the year of Parsons's birth, the famous *Great Eastern* was begun. She crossed the Atlantic some years later at an average speed of 14.4 knots. The year he left Trinity the White Star Liner *Baltic*, screw-driven, won the 'Blue Riband' at an average speed of 15.9 knots. Twenty years later the triple-expansion engine enabled the 21,000 ton Cunard *Lucania* to attain an average speed of 21.9 knots for the Atlantic crossing, but the next eight years of intense competition saw the average speed for the trans-atlantic run improve by less than a knot and a half. Then came the Cunard liners *Mauretania* and *Lusitania* equipped with Parsons turbines. The first crossing of the *Mauretania*, a much larger ship than the German holder of the record at the time, was considerably faster than any previously achieved, and before the end of her career she had pushed up the Atlantic record from 23.30 to 27.22 knots. The record then passed to German and Italian ships driven by steam turbines, was held for a time by the French turbo-electric liner *Normandie*, but has ever since 1938

belonged to a vessel driven by steam turbines, first the *Queen Mary*, now the *United States* which crossed the Atlantic in 1952, at an average speed not far short of 36 knots, two and a quarter times that of the *Baltic*, the wonder-ship of Parsons's college days.

When Parsons went to Trinity the French were making the first experiments with steel-built warships, and their *Admiral Duperré*, 1879, of 11,800 tons and 14 knots speed, was thought the last word in battleship construction. Twenty-six years later the first turbine-driven battleship was laid down, the British all-steel *Dreadnought* of 17,900 tons, which steamed 22.4 knots for three hours on trials, and in this and other respects wholly upset accepted naval standards. Before Parsons's death, H.M.S. *Hood* of 41,000 tons was steaming at 32 knots with geared turbines, and not long after it a turbine-driven destroyer of the French Navy (she had Rateau turbines constructed on a different principle but under the impulse of competition from Parsons) had surpassed 50 land miles per hour. Soon after that the Japanese commissioned a 27 knot turbine-driven battleship of 72,800 tons.

None of this could have been foreseen when Parsons brought his experimental *Turbinia* (2000 s.h.p. compared with the *Hood's* 150,000) to Queen Victoria's Diamond Jubilee naval review. With typical audacity he steamed his experimental vessel through the ranks of the British Navy and far outstripped the most rapid warship sent to intercept him and restore the official order of the day. The *Turbinia*, of which the hull and propeller as well as the engines had been designed by Parsons after much patient experiment with models, had attained 34 knots. The fastest warship of the time could just reach 27.

Parsons's challenge could not be ignored. The British Admiralty ordered turbine-driven destroyers. Rateau in France was stimulated to push forward his researches into the impulse-turbine, with which the North American Curtis was also experimenting, but nobody believed the turbine was suitable for big ships. Then Lord Fisher, impressed by certain tactical lessons of the Russo-Japanese War, and determined to win the armaments race with Germany in which Britain was then indulging, ordered the *Dreadnought* after a long discussion at the Admiralty with the inventor himself. The pattern of the too numerous naval battles of the past forty years was largely decided at that meeting, for the turbine-driven capital ship was capable of doing things no other type could do, of growing into the 72,800 ton Japanese *Yamato*, of turning into the giant aircraft carrier, mainstay of most fleets of to-day.

Already in 1897 Parsons received inquiries from the Youghal and Blackwater Steamboat Company, unfortunately long defunct, for a passenger

ship with a turbine engine, and Ireland nearly had the honour of commissioning the first turbine-driven merchant ship. Negotiations, however, came to nothing, and it was Captain John Williamson, a hard-pressed Clyde pleasure-steamer owner, who first ventured to order a turbine passenger ship. (She was also the first screw-steamer to enter service on the Clyde and Isles route.) This ship was the *King Edward*, built with engines designed by Parsons at the Dumbarton Shipyard of William Denny, who like Parsons, was not afraid of taking risks and braving conventional opinion in a way hardly possible now to the heads of large industrial undertakings.

Parsons said that he was still uncertain what his marine engine could achieve, and declared himself more excited on the day of the *King Edward*'s successful trials than even at the Diamond Jubilee Review. The *King Edward* remained in service until 1952, just over fifty eventful years—and her engines are preserved in Edinburgh. Her success encouraged owners of ocean-going ships to fit turbines in their new vessels. The first turbine steamer to cross the Atlantic did so from Merville in 1905 in eight days (the Belfast-built *Victorian*). Then the Compagnie Générale Transatlantique ordered the *Charles Roux* with turbines, and Cunard the *Carmania* which steamed one knot faster than the *Caronia*, her twin in every respect except that she had triple-expansion engines. There followed the *Mauretania* and *Lusitania* and the pattern of the Atlantic schedule of our own day was already visible.

Already, however, the internal combustion engine was distantly challenging steam, and by the time Parsons died the diesel cargo ship was already common. More than half the ships built in recent years have been diesel-driven, though ship-owners and admiralities always show preference for turbines for really big ships; and recently one of the biggest companies operating oil tankers, long known for its preference for the diesel engine and its prolonged experiments in the use of boiler oil for diesel engines, surprised the shipping world by ordering a new fleet of tankers with steam turbines, on the grounds that the steam turbine is lighter, can power all auxiliary engines, and uses cheaper oil, though its fuel consumption is considerably greater.

Just as Watt ridiculed the idea that his invention could be used for propulsion, so Parsons rejected the suggestion that the internal combustion engine could be combined with the turbine. To-day, however, the gas turbine is being widely spoken of as the marine engine of the future. Warships have made successful experimental cruises with gas-turbine engines, and a tanker has crossed and recrossed the Atlantic similarly driven. The turbine principle is, however, securely established as the motive principle for ships

for the whole of the foreseeable future, above all as the projected atomic-power marine engine will, according to all experts, be a turbine driven by atomic energy. Recently, too, the superior efficiency of the 'turbo-prop' aeroplane engine over other types has been widely proclaimed. In all the latest experiments in these matters, 'Pametrada', the engineering research organization which can be traced back to Parsons, is actively concerned.

Much could be said about the impact of Parsons's inventions on his contemporaries. Academician Krylov, the great Russian naval architect who, like Parsons's father, was interested in designing the unsinkable ship, gives a dramatic account in his autobiography of the effect on the Admiralty at St Petersburg of the news that the huge, all-big-gun *Dreadnought* was being built in Britain with engines that could not be emulated in the Russia of the Tsars.

Where Parsons's own self-discipline showed itself most clearly was in other dramatic moments that punctuated his career. These were moments of doubt, when failure seemed more likely than success. His patience with the model *Turbinia* has been mentioned. He needed, and showed, as much when the first turbine-driven destroyers were both lost in accidents at sea, when the *Lusitania* and *Mauretania* were found, in spite of the noisy recognition naturally given to their capacity for record-breaking, to be developing defects due to excessive vibration and were unable for months to reach their contracted speed; when facing difficulties in the development of the geared turbine, and further difficulties attended by disaster and loss of life in the installation of superheated marine steam turbines; and when apparently inexplicable accidents occurred in power stations equipped with steam turbines, he never acknowledged himself beaten, and followed up the causes of his setbacks into obscure realms of metallurgy and other sciences. Similarly, he refused to allow pressure of business to interfere with his determination to edit and publish many of his father's scientific works, and he displayed true scientific objectivity on many occasions when, as a business-man as well as a scientist, it was not easy for him to do so; notably in his famous controversy with Yarrow, the great designer of steam boilers and champion of the Rateau impulse-turbine.

Charles Parsons was a whole man, a man of action in the truest sense, for his activities were based on profound thought that refused to peter out in sterility, and they fulfilled a clamant social need of his age. In few careers can there be found a similar happy combination of genius, wealth and opportunity. How much harder was the career of his French contemporary Rateau, and how it fell short, not by much in genius or conception, but in fame and quantitative achievement, of that of Parsons.

One hundred years after his birth, in a wholly different historical context

which cannot expect to see a career such as his repeated, all interested in the sea, and above all those in these islands so interested, will not fail to pay tribute to the memory of one whose genius so mightily affected maritime history.

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MERCHANT SHIPPING IN THE SEVENTEENTH CENTURY

THE EVIDENCE OF THE BRISTOL *DEPOSITION BOOKS*

By Patrick McGrath

PART II

The *Deposition Books* have a good deal of information about the men who sailed in the merchant ships, but they do not tell us much about their origin or training. It seems likely that the masters of ships were often men of some substance. A number of them seem to have been hand-picked from the start of their careers, for the apprentices whom some merchants took on from time to time to train 'in the art of navigation' were no doubt earmarked for command. At one time, the Society of Merchant Venturers was apparently thinking of organizing some kind of trade-test, for when it was trying to get a renewal of its Charter in 1621, it proposed to insert a clause by which it was to be authorized 'to examine and admitt All and whatsoever marriner and marriners that shall vndertake the Charge or government of any ships or shipping belonging or apperteyning to this Citty and Porte of Bristoll and members of the same',¹ but it did not in fact get this right. There does not seem to have been any formal test, and presumably a man became a master after he had acquired the necessary knowledge and experience and was generally acknowledged to be capable of handling a ship. Yet it would seem that on occasions a master might lack technical training and have to rely on the skill of his subordinates for the actual navigation of the ship. A curious situation arose in the ship *Bordeaux* of Flushing sailing from the West Indies to Ireland. The purser stated 'That the owner of the shipp often desired the skipper to informe the steersman whither they were bound (comeing howewards) which he refused to doe in regard there had beene a falling out betweene them in the Indies, vntill such tyme as they were neere the coast of Ireland, and that then he was forc't to informe him, for feere the steersman should carry the ship for Flushing, *the skipper being altogether vnskilfull in the art of Nauigation . . .*'.² On another occasion a merchant chartered a ship for a twelve months' voyage to Ireland and loaded her with £400 worth of goods, all in the charge of Hugh Hall, a *cooper* of Bristol 'who was deputed

¹ Patrick McGrath, *Records Relating to the Society of Merchant Venturers of the City of Bristol in the Seventeenth Century* (Bristol Record Society's Publications, Vol. xvii), pp. 12, 13.

² *Depositions*, 1, 194.

and tooke vpon him to be Master And to leade and gouerne the said shipp'.¹

As has already been stated, the masters were often part owners of the ships they sailed. William Hooper, for example, was master of the *Nevis Merchant* of which he owned an eighth share and he also had on board on his own account ten tuns of sugar, a thousand pounds of indigo and other goods laden at Nevis.² Even when he was not an owner, the master naturally enjoyed special opportunities for making a profit from trade, and although efforts were made to ensure that masters and mariners paid freightage on goods carried on their own account, it seems likely that the merchants often unwittingly paid the freightage themselves.

The master of a seventeenth-century ship needed all his wits about him for he was likely to run into all sorts of difficulties and dangers quite apart from those presented by the sea. Few, however, can have been so unlucky as Richard Tayler 'of Horsey downe in the County of Surry mariner' who was master of the *Elephant and Castle* of London, a ship of about 200 tons. According to his deposition, he set sail from Gravesend on 10 April 1642, and after putting in at St Lucar set sail towards Galicia. He stated that 'som sixe leagues off Cape Pitcher on the coast of Purtugall they were on the first of August 1642 sett vpon by eight sayle of Turkes men of warre and continued in fight with them the space of fower houres during which time the said ship received damages in her hull sailes and riggen to the full value of one hundred and forty pounds at the least besides sixe barrells of powder and shott spent in the same fight'. They escaped from the Turks and reached Galicia 'where the said Master did loose above three hundred and fifty pounds by the fall of the King of Spaines money which was his whole adventure soe that he had nothing left but the eight part of the ship which was worth two hundred and fiftie pounds or neere thereabouts'. Then when sailing from Galicia they ran into 'very extreame tempestuous and stormie weather' and tried to ride out the storm at anchor for sixteen hours off St Lucar. The storm increased and they were in danger of sinking while at anchor 'by which reason wee were forced from fower good Cables and three anchors with boyes and boye Ropes', and they had to run the ship ashore in order to save her. The storm went on for five or six days, but at the first opportunity they sent boats to search for the anchors and cables. After spending four days sweeping for them, they recovered only the smallest of them. Two of the cables were stated to be worth about £110, the anchor about £21, the sheet cable about £64, and damage to the ship amounted to about £50. In addition they also 'spleete and lost as many good sailes as cost at London full sixty pounds or more'. Subsequently, the master took

¹ *Depositions*, II, 187, 188.

² *Depositions*, VI, 4, 5.

a cargo from Spain to Bordeaux 'where his Marchant brooke (broke), by which he lost about two hundred pounds being for the time he then served the shipp then serveing by the moneth'. Afterwards, he took a cargo of hoops from France to St Lucar 'where the said hoopes were nothing worth at all, nor could gett imployment from thence either to London France or Frander (*sic*) by reason of the great difference in the Kingdome of England, and having then noe monie to pay his men their wages nor to quite (quit) the shipp of engagements in the Country, the said Master was enforced to take a freight for Bristoll, and to engage the said ship by an absolute bill of sale vnto Shershaue Cary of Bristoll merchant and Richard Crocker of St Lucar merchant for the full summe of five hundred and seaventeene pounds and fower shillings'. On the voyage back from Spain to Bristol the ship ran into a storm in the Severn 'and splitt four of her biggest sayles and spoyled her tackling by the extreamity of the weather to the value of sixty pounds at least'. The ship arrived in Bristol at the end of December 1643, and in the following January 'the said shipp and all belonging to her was seized vpon by the kings party, Sir John Penington and others, and eight of her best gunns taken from her and were placed about the works of this Citty in seuerall places and soe both shipp and gonns were vnder imbargoe from the beginninge of January aforesaid vntill the later end of September 1644 which did cost the Master Richard Tayler great costs and chardges in sending to Oxford to cleere the said shipp and in goeinge himselfe to Bathe to sollicit his Majestie about itt. . .'. Finally, in April 1645 the ship was plundered in Hungrood by Sir John Muckland's men of powder and goods to the value of at least £40. Sir John Penington promised payment for the same, but 'by reason that the said Sir John Penington suddenly afterwards departed this life there was nothing at all recouered'.¹ It was a sad story of the misfortunes that might happen to a ship's master, and no doubt it lost nothing in the telling.

According to some of the depositions, not all masters did their duty by the merchants whose goods they carried. One witness reported that the master of the *Amity* bound from Newfoundland to Rochelle with a cargo of fish 'had in the Breadroom of the said ship a parcell of Refuse fish being aboute a duzen kintalls' and added that he did 'take and mixe the same refuse fish with Generall merchantable fish that was in the hold of the said ship, and tooke the like quantitie of Good merchantable fish out of the same and in the place and roome of the said refuse fish',² while the master of the *Swallow* of Ilfracombe, when forced into Tenby by bad weather, not only refused to take advantage of the offer of a convoy to protect him against the threats of a Brest man-of-war, but was even suspected of acting in collusion

1 *Depositions*, I, 119-21, 157, 162, 163.

2 *Depositions*, III, 92.

with the man-of-war, since when she was first sighted he said that she was not a rogue but an 'Limouth vessell that was drawing of Stones'. Moreover, when the ship was taken, eighteen pieces of gold which had been hidden by one of the passengers with the knowledge of the master mysteriously disappeared.¹ Even less satisfactory was the conduct of Hugh Hall the cooper who undertook 'to leade and gouverne' a ship chartered for a twelve months' voyage to Ireland and the West Indies. He not only kept her in Ireland and Madeira for eight months 'But did fraudulently and deceitfully sell away the said Shipp and goods in St Christophers and did after viciously consume and spend the proceeds of the said . . . goods and the said Shippe in riotous Company and by exorbitant and by dissolute courses.'² Of another master, it was reported that at Malaga he 'disposed of one Barrell of Beare 3 duzen of Fish 2 drafts of wood one bundle of hoops 3 peeces of Beeffe 3 peeces porke and 15 pounds of Candles and 100 and a quarter of bread of the said ships provision so that they were necessitated through want of provisions to be 13 weekes in their returne home'.³ Sometimes, however, the master was the victim of deceit, and William Symons of the *Leopard* took to Nevis 24 yards of parchment lace and 12 dozen of silver buttons at the request of Henry Dighton, brewer, 'it being an adventure sent in the said Ship by the said Henry Dighton'. These goods were sold to a merchant in Nevis but they 'afterwards proved to be false and counterfeit'.⁴

Some of the merchantmen carried surgeons on board, and from time to time there is a glimpse of their activities, surgical and non-surgical. One of the questions put to witnesses in a case concerning the *Peter and Mary* of London, 90 tons, was 'whether or noe when the men dyed in the shipp soe fast and the rest very sick Mr Wadloe did not confesse that he knew William Cock was noe Chirurgion but termed him a horse leech', to which some witnesses replied 'they heard Mr Wadloe terme Cock to be noe Chirurgion but a horse leech and a Butcherly fellow'.⁵ Details of the manner of signing on a surgeon are given in the evidence of a tailor who described how Mr Edward Bullock, master of the *Goodwill*, came to his house in Horse Street where William Springett, surgeon, then lodged. Bullock asked Springett whether he was shipped or not, and on being told that he had shipped in the *William* for Virginia, entreated him to get himself off if he could and go along with him, telling him that he would thereby better himself. Springett managed to get himself out of his agreement with the *William*, and Bullock agreed to give him the same wages, 'calling him doctor', as well as £3. 10s. to furnish his chest and 600 pounds of tobacco for portlage. Springett said 'Then I do not better myselfe'. Bullock then raised the amount of tobacco

1 *Depositions*, II, 161-3.

2 *Depositions*, II, 188.

3 *Depositions*, II, 191.

4 *Depositions*, II, 150.

5 *Depositions*, I, 221, 226.

to 800 pounds and Springett told him 'I will goe with yow and therevpon they shooke hands together'.¹ It is interesting to note that the man described as 'Chirurgion' of the ship *Prosperous* of Bristol was only twenty-one years of age.² Perhaps standards were not unduly high. At least one surgeon was prepared to make himself useful in other ways than by the exercise of his professional skill, for when the *Bordeaux* of Flushing was approached by a parliamentary frigate and was anxious to conceal her destination, 'the writeings and lettres there were concerning their putting for Waterford were fastned to a spike and by the masters Order throwne ouer-board by the Chirurgion'.³

The boatswain also appears from time to time in the records. One of the Ordinances of the Society of Merchant Venturers issued in 1639 stated that masters, mariners and seamen often brought home merchandise of great value to the prejudice of owners and merchants 'by gettinge the same privately into and from the shipps without paieng any freight. . . . And without paieng his maiesties Customes or any other duties. . . .' To prevent this abuse, it was decreed that 'Every Boteswayne and Purser of every such Shippe shalbee required vpon paine of the losse of their wadges To enforme the saide Chief Laders and Chiefe Ouners of the quantety and quallitie of such theire Goods'.⁴ The records kept by the boatswain are referred to in some of the depositions. George Garland, who was boatswain of the *Marigold*, gave evidence that in Cadiz he delivered 620 bundles of hoops and took aboard 12,000 pipe staves 'and he wrote the same into hiis booke which he hath now in his custody together with diverse other passages therin written concerning the same voyage',⁵ and William Marriner, boatswain of the *Long Jonathan* of Bristol, after giving an account of a cargo of wines off-loaded in the Hungroad, continued 'And this deponent the more precisely knoweth this to be true, for that he tooke accompt of all the parcells and quantities of wyne that were laden aboard her in the Country with their marks and for whom laden, And alsoe tooke accompt of their discharging into the lighters, Being Boatswayne of the said ship, as the custome and vsage is. . . .'⁶

Although the *Deposition Books* tell us a good deal about conditions in the merchant navy in the seventeenth century, they do not throw much light on the background or the training of sailors. During the early part of the century, at least, the Society of Merchant Venturers seems to have arranged some sort of instruction, as may be seen from an entry in the Treasurer's Accounts, 1618-19, 'paide to Francis Jones for one yeeres fee allowed him

1 *Depositions*, II, 68.

2 *Depositions*, I, 238.

3 *Depositions*, I, 194.

4 J. Latimer, *History of the Society of Merchant Venturers of the City of Bristol*, pp. 104, 105.

5 *Depositions*, I, 46, 47.

6 *Depositions*, I, 70, 71.

for instructing poore sailers in the Arte of Navigacion (£) 004',¹ but it is not certain that this continued throughout the period. On the other hand, records of the apprenticeship of sailors are much more common than in the Elizabethan era.

Oppenheim states that it appears from rather limited evidence that wages of merchant seamen in the reign of Charles I were between 22s. and 30s. a month. He adds that there was no system of recording contracts of service, that all engagements were made verbally, and 'that it often happened at the end of a voyage that the owner disputed the terms, when the sailors were left helpless, having no proof to bring forward'.² We have seen one such verbal contract in the case of a ship's surgeon. The fact that it was subsequently put on record in a deposition may indicate that some dispute had arisen later. Another deposition shows the difficulty a seaman might have in getting his wages, for Edward Simmons, mariner, aged twenty-one years or thereabouts, claimed that £8. 2s. were due to him for a nine month's voyage in the *Swallow*. A bill had been drawn on the merchants by the factor in Virginia 'but neither by the same bill nor by any other means can he get it or part of it from the said merchants'.³ Another seaman was not so patient for in the course of the voyage of the *Happy Entrance* from Bristol to Corfu, Zante and Venice, Robert Winmouth, 'common man of the said shipp', had the master arrested at Zante 'for Eleauen monethes and a halfe a monethes wages, due vnto him att two and twenty shillings per moneth, which amounted to the summe of Twelue pounds and thirteene shillings'. The master was left in prison for two days and one night, and before he was released he gave Winmouth twenty pieces of eight and bound himself by a bill to pay the remainder 'at first sight in England or Holland'.⁴

Some if not all members of the crew supplemented their wages by trading on their own account. The regulations of the Merchant Venturers which were designed to make them pay freight on such goods indicate that the practice was widespread, and we have already seen an example of a ship's carpenter who not only failed to pay freight but actually took on board so much merchandise that there was no room for some of the goods of the merchant. Sailors could, however, carry on a quite legitimate trade. When Humfry Diggins a mariner aged about twenty was sent to collect and mark some lead which had been bought by the master of the ship on which he was sailing, he evidently saw the possibility of doing a little trading on his own and he arranged to buy from the master over half a ton of lead, giving him five shillings more than he had paid for it. The master of the ship died before it

¹ Patrick McGrath, *op. cit.*, p. 114.

² M. Oppenheim, *History of the Administration of the Royal Navy 1509-1660*, p. 243.

³ *Depositions*, I, 63.

⁴ *Depositions*, II, 44, 45.

sailed, but his widow entrusted the lead not to the new master but to Absolom Covy, aged twenty-three, who went as boatswain, saying that he was a young man who could do the business as well as his master. In Rochelle Covy sold this lead and also some of his own and invested in canvas which he brought back to Bristol.¹ There are also indications of where sailors got the necessary capital for their adventures. Nicholas Shapley, for example, entered into a bond with Edward Gerrish, grocer, in the sum of £20 for payment of £10 principal and 6s. 8d. per pound interest 'for adventure thereof per moneth vppon the returne of the *Bristol Merchant*',² while the ship's carpenter of the *Mayflower* of Bristol bound for Ireland and St Sebastians gave evidence that at Kinsale Edmund Yeamans 'set out to some of the same ships company at Bottomare the sume of eighteene pounds after the rate of sixe shillings in the pound to be paid att the retorne of the same ship from St Sebastians'.³ In another case, witnesses stated that while in Bilbao they had seen a bill by which a Bristol and a Barnstable sailor were bound to yet a third sailor in the sum of twenty pounds.⁴ According to Roger North in later seventeenth-century Bristol 'all men that are dealers, even in shop trades, launch into adventures by sea, chiefly to the West India plantations and Spain.'⁵ Possibly some of these small dealers acted through members of the crew and requited them for their trouble either by entering into temporary partnerships or by paying them commission.

There is an occasional glimpse of members of the crew engaged in the business of transporting servants to foreign plantations, a trade which might be quite legitimate, but which also had its shady side. In 1654 Thomas Jefferis of Bristol 'Chirurgeon aged 26 yeares' deposed that while in Barbados, at the request of Mrs Mary Meredith, widow, he enquired concerning her son and 'haveing met him there this deponent questioned with him touching his being there and with whome he lived. He answered that he lived with one John George a planter of the same Island and that he had beene transported over thither by the defendant being then Carpenter in the ship *Dolphin* of Bristoll'. He added that the plaintiff 'had a wound on his head and there was the signes of Lashes on his sides' and that he had been cruelly and savagely dealt with. It is not quite clear whether this was a case of kidnapping or whether the young man had brought the troubles on his own head. According to the sworn statements of five sailors, what had happened was this: one evening about sunset a young man waded out into the mud near Kingroad and asked them to take him into their boat. They refused but he continued to press them, and as the tide was coming in they feared he would be drowned and so took him on board and carried him to

1 *Depositions*, I, 106-7.

4 *Depositions*, I, 122, 123.

2 *Depositions*, I, 210.

5 *The Lives of the Norths*, ed. A. Jessopp, 1890, I, 156.

3 *Depositions*, II, 122.

the *Dolphin* which was ready to sail for Barbados. On the following morning, the merchant of the ship and one Hiscox asked him whether he would go on shore 'and he said he would leape overboard rather than goe on shore and that he would goe to the Barbadoes where he said he had a Brother vppon which he entred himselfe in the Merchants booke by the name of John Chetwind and said he came from Gloucester but when he was at Sea he said his name was Thomas Meredith'. When they came to Barbados, the defendant and John Blenman 'did put of the said young man to a Planter in the Iland'. The sailors added virtuously that they 'had noe part of the comodity that was received for the same by the defendant'.¹ Their story does not ring quite true, and one is reminded of Mr Riach's words to David Balfour in *Kidnapped*: 'You're not the only one, I'll tell you that. There's many a man hoeing tobacco overseas that should be mounting his horse at his own door at home; many and many'.

The *Deposition Books* tell us a little about discipline in the seventeenth-century merchant navy. There does not seem to be much evidence of that savage treatment that was meted out to men in the Royal Navy. Indeed, discipline sometimes seems to have been very slack. As we have seen, the crew of the *Tiger* of Amsterdam got drunk and looted the cargo unchecked by the master and the ship's merchant was unable to get them to load all the goods he wanted. When the skipper of the *Bordeaux* of Flushing saw a Parliament ship approaching and was anxious to conceal the fact that he was bound for Waterford he mixed bribery with threats and 'did giue all the Companie strongwater. . . and prayed them not to informe that he was bound to an enemies port. . . sayeing to the Companie if they did reveale it they should loose their wages'.² Desertion does not seem to have been at all common as it was in the Royal Navy, although it does occasionally appear in the records. George Warden, for example, gave evidence that when he was shipwright in the *George* of London bound for the Straits of Gibraltar, one of the company, George Proctor, did 'voluntarily forsake the said ship at the Port of Mercillia in Province, without the consent of the said Master' and that although the master informed Proctor that if he continued in the ship he would receive his wages 'yet neverthelesse he went away'.³ There was a case of desertion on a slightly larger scale at Malta when Moyses Harding, chief mate and pilot of the *Sara* of London, the gunner, the second mate, and two of the mariners went on shore and refused to return 'saying that they had entered themselves into the service of the Prince of Malta'. It was stated that they had behaved badly before and were likely to make mutinies.⁴

¹ *Depositions*, II, 174-5, 167, 192.

³ *Depositions*, I, 118.

² *Depositions*, I, 192.

⁴ *Depositions*, V, 114, 115, 116.

The regulations of the Society of Merchant Venturers also indicate that discipline of crews in port was often unsatisfactory, at any rate from the point of view of the merchant. The Ordinances of 1639 stated that as Kingroad was dangerous, particularly in stormy weather, the master, his mates and the whole company (except such as were sent ashore on the ship's occasions) must remain on board until the ship had been safely anchored. Moreover, the practice of using hired men to unload was 'to the great damadge of the Marchants, laders, and Ouners', and in future it was ordained 'There shalbee allwaies aborde the saide Shippes The Maister or one of his mates, the Boteswaine and Quarter Maisters, with a competent number of the saide Shippes Company to discharge and vnlade the said Shippe, And shall not make vse of any hired men in doeing the same'. On all ships outward bound and awaiting a fair wind in Kingroad 'There shall Remyne aborde... The maister, his Chiefe Mate, The Boteswaine, and halfe the Companie at least, vntill they sett sayle.'¹ The regulations of the Merchants' Hall of 10 November 1680 also instructed masters to discharge their powder as soon as possible on arrival, to take care about lighting fires and candles, to see that boys and servants did not leave their ships, especially on Sundays, and to ensure 'That noe idle persons be receaved or enterteined on bard any shipp having no lawfull cause to be there, the enterteining of such persons being both dangerous and very prejudiciall to merchants and Owners.'²

The lives of those who sailed in the merchant ships of the seventeenth century were full of risks and must often have been short. Some of the risks could have been avoided. When the *Love's Increase* set out for Waterford and the West Indies, according to one witness 'shee was extreme leakey in soe much that she was not in a fit condicion to be sent to sea'. She made Waterford, leaking all the time, and then when she was six days out on her way to Barbados 'the Leake grew Worse and Worse, and Come in soe fast vpon them, That (they)... were necessitated for the Safeguard of their lives... to saile back again and put into Kings-saile in Ireland, the said ships Company being Tired out with pumping and hard Work'. It was here that one of the crew deserted and others were preparing to do so when the ship's merchant persuaded them to return. They set out once again, but the leaks continued 'and most of all the ship(s) Beere and other provisions and water were wholly lost and spoiled... and the ships Company and passengers thereby were like to be starved and severall of them (that is to say 7 or 8 persons) for want of Water onely and not by any other sickness or decease whatsoever died'. The witness stated that if the voyage had gone on another week they would all have died. They did in fact reach Barbados,

1 J. Latimer *op. cit.* p. 103.

2 Patrick McGrath, *op. cit.* pp. 145, 146.

but the leak continued 'soe much that the whole Company were all tired out and their hearts almost broke with pumping and resolved to lie in prison rather than to sayle in her, one of them being for his Refusall to serve in the said ship imprisoned for the space of a month'. When she was half loaded for the return voyage, they had to unload and twice careen her, hoping to make her seaworthy, but in spite of all their efforts and the hiring of extra carpenters from the shore at the rate of 7s. a day and victuals, she remained insufficient 'and the said ships Company vtterly refused to come home in her, not daring to adventure their lives therein, chooseing rather to live in prison'.¹ A similar lack of regard for human life was seen in the attitude of one of the owners of the *Mary Rose* which was about to sail for Newfoundland. When told that she was not staunch between wind and weather and that a carpenter ought to examine her, he said 'shee needed noe such trouble for she was firme enough'. In fact she was leaky and the crew 'were forct to pompe all the way over . . . sometymes with both and continually with one pompe . . .'²

The depositions contain numerous accounts of the unavoidable dangers of the sea and of ships either heavily damaged or completely lost as a result of unusually bad weather. The chief mate of the *Robert* of Bristol related how in Barbados they lost their two best anchors and part of a cable and were forced to sling one of the guns and use it as an anchor. On 23 September as a result of bad weather 'they spent their topmast'; on 7 October a storm broke the mainmast, and on 4 November they shipped a sea which stove in the longboat, which, with the deck, fell into the gundeck. They had to cut the longboat in pieces and throw it overboard to save the ship and had to make holes in the gundeck to let down the water. There was five feet of water in the hold and they had to pump and bail all the time. The climax of this unfortunate voyage was that when the ship did reach Bristol, and was forced by distress of weather to anchor higher up than was usual, the anchors gave way and she struck about a league above Kingroad.³ Another witness gives an account of the loss of the barque *Mayflower* which was caught in November off the Irish coast. He stated that 'there arose a great storme with the wind at East, the barque lyeing on a lee shore, and not able to beare anie saile at all, haveinge five foot of water in the hould, she was there splitted in peices and cast awaie, theis deponents and Company hardly escapeing to shore with safetie of their lives'.⁴ The company of the *Elizabeth* of Bristol who were caught by a great storm in September on the Bank of Newfoundland narrowly escaped a similar fate for 'it proved soe boisterous that they the said Deponents and company were inforced for safeguard of their lives

¹ *Depositions*, IV, 11-13.

³ *Depositions*, V, 117-19.

² *Depositions*, II, 13.

⁴ *Depositions*, I, 199, 200.

to cut the maine mast of the aforesaid ship and through him overboard with the saile and rigging, there being then 5 foote of water in the hold'.¹

Other dangers which sailors had to face are illustrated by the fate of the *Adventure Frigate* bound for Ireland and Marseilles which hit a sunken rock at night and sank with her whole cargo,² and the *Trial* of Bristol bound for Barbados with a cargo of linen which was entirely destroyed by fire.³

When a ship was held up by adverse winds or bad weather and took more than the expected time over her voyage, there was a serious danger of provisions giving out. When the *Rutter* of Amsterdam was delayed by very foul weather in her voyage to Portugal and Bristol, one of the crew stated 'their extremitie for want of victualls was such that they were enforced to eate great quantities of Orenge Leamans and Musk Milliams (melons)'⁴ and when the *Mary and Francis* of London took fifteen weeks to go from Malaga to Ireland, a witness stated that they were 'extremely necessitated for want of provisions, each man of the said ship being allowed for 5 weekes onely 3 ounces of beef and one biskay cake a day and that 5 of the same ships company died in the same voyage'.⁵ Less disastrous but no doubt very irritating was the misfortune that befell the crew of the *Unicorn* who found, four days out from Bristol, that the beer was defective 'in so much that they could not make use of any more than one Tonn of it and thother five tons of beare did soe stinke that it was not fit for men to drinke but was all threw away'.⁶

The seventeenth-century seaman did not have to face only the dangers of the cruel sea. He had to contend also with numerous human enemies. During the century, there were various wars with the Spanish, the French, and the Dutch, and the effects of these wars on merchant shipping are naturally reflected in the *Bristol Deposition Books*. In June 1660, for example, the ship *Bonaventure* of Bristol, 200 tons, returning from Barbados, was set upon off Ireland by an Ostend man-of-war and sunk after a four hours fight,⁷ and the year before the *Endeavour* of 300 tons sailing to Leghorn and back was 'sett upon by Two Spanish men of War, and by them chased above Twenty Leagues, and by them taken as prize with all her goods. . . and carried into May Yorke in the Dominions of the King of Spaine. . .'.⁸ Another deposition describes an encounter with the French in 1674. The Master of the *Peter* of Bristol 'mett with a French man-of-war belonging to St Mallo in France of 32 peeces of Ordinance haveing onBoard 230 men. . . And the said French man of War then fired a vollee of shot on their said

1 *Depositions*, III, 35.

3 *Depositions*, II, 157.

5 *Depositions*, II, 193.

7 *Depositions*, IV, 228.

2 *Depositions*, IV, 287.

4 *Depositions*, I, 102.

6 *Depositions*, II, 123.

8 *Depositions*, IV, 202.

ship Peter and killed their Mate and after they had soe done the said Captain Briant . . . came on Board and Plundred the said Vessell . . .'¹ On another occasion the crew did not wait to be taken prisoner, for when a French man-of-war approached the barque *Pleasure* of Chanksbury 'the master and company of the said Barque Pleasure perceiueinge that the said French man of Warr came to take hir and make a prize of hir did for sake the said Barque Pleasure and went away with a boate to save themselves and their money which they had putt aboard the said boate'.²

The three Dutch Wars of the seventeenth century took heavy toll of Bristol shipping, for the Dutch were formidable seamen and skilled naval architects. It was impossible for the Royal Navy to give complete protection to merchant shipping and armed merchantmen were not always capable of dealing with Dutch privateers. The disaster that such encounters might bring into the lives of ordinary sailors is seen in the grant made by the Merchants' Hall in 1667 to Anne Duncan, wife of James Duncan Mariner, 'now prisoner in Middleborough' to help support her and her children, and in payment of six pounds to Henry Cott, mariner, 'towardses Recouery of his eyesight lately lost in an engagement at sea in the shipp Margaret of this Citty with a privateer of Holland'.³

Throughout the century, the pirate states of North Africa constituted a terrible danger to seamen and the European powers failed to take adequate action against their mutual enemy. When the *William* of Bristol was sailing from Madeira to the Azores she 'met with two Turks men of warr, whoe assaulted the said shipp and fought with hir by the space of two or three howers, and kild the said Master and one more of the Company and wounded a greate many of the rest and in thend sunke hir downe right and tooke and carried this deponent and the rest that escaped to Argier'.⁴ There are in the records of the Society of Merchant Venturers of Bristol many entries concerning sailors who had been captured and made slaves in Africa. On 19 September 1666, for example, the Hall 'vpon the petition of the wife of John Hawkins a poore Seaman now in slavery with the Turkes . . . did vote him Five powndes towardses his Redempcion out of his slavery' and on 10 November 1678 it was 'voted and ordered that twenty poundes be distributed to and amongst the mothers and wives of the two and twenty captives in Algier who have now exhibited their joint peticons for their present releife';⁵ but although large numbers of captives were redeemed, many ended their days as slaves in Africa.

The Civil War and the troubles in Ireland added to the difficulties both

¹ *Depositions*, vi, 41.

³ Patrick McGrath, *op. cit.* pp. 106, 107.

⁵ Patrick McGrath, *op. cit.* pp. 106, 108.

² *Depositions*, II, 123.

⁴ *Depositions*, I, 83.

of merchants and of seamen. The varying fortunes of war are reflected in the story of the *St Patrick of Ross* which was driven into Bristol by bad weather in 1646. It came out that she was in fact none other than the *Love's Increase* of Bristol. While on a voyage to France the *Love's Increase* had been pressed into the service of Parliament, and had then been captured by the Irish rebels who apparently changed her name. Later while sailing from Ross to France she met a Parliamentary frigate which took off the Irish crew and put on board a prize crew. She was, however, in danger of sinking, and the frigate wafted her as far as Minehead and left her there without any instructions. The master decided in view of bad weather to come to Bristol and was no doubt surprised to find that she was recognized there, for William Bullock a ship's carpenter swore that she was the *Love's Increase* which he had built at the Key of Bristol only six years before.¹ In 1644 the *Little John* of Bristol on her homeward voyage from Tenerife 'was met with by a shipp of London called the *Marmeduke* then in the Parliament service vnder the comaunde of Captain Poulters . . . and was by him Caryed with all his wyne and goods aboard into Myleford Havon in the River Seaverne, where the said Shipp and goods were solde by order of the Admirall Captain Moulton for the vse of the Parliament';² and in 1653 the master of the *Samuel Pink* on his way to the West Indies 'espied to the Northward a ship making vp towards him, but the said ship Samuells Pinke not beinge of force to resist as he conceived made his flight frome the said ship'. He was, however, overtaken by the man-of-war and carried into Brest. He demanded of his captor the name of his ship and from whence he had his commission. He was told 'that the ships name was the *Mary of Bristoll* aforesaid and his name Nicholas French somtyme of Waxford in Ireland and that hee had his Comission from the Duke of Yorke but shewed this deponent none'. The *Samuel Pink* and her cargo were made prize 'and the company cleared and left to get passages for their owne countrey'.³ As Bristol was at one time held by Parliament, was later taken by the royalists, and subsequently was retaken by Parliamentary forces, life was difficult for Bristol ship-owners and for the men who sailed their ships, and they suffered at the hands of both parties.

The breakdown of government in the Civil War also provided some opportunity for the practice of straightforward piracy which had been fairly common in the Irish Channel and the Severn until the Earl of Strafford put it down with a heavy hand. On 24 January 1653, for example, the *George* of Bristol 'was set vppon by a pirate that pretended himselfe for the State of England and fought with the said ship *George* vnder the English Coloures, and by that meanes the Master and Company being deluded, the master and

¹ *Depositions*, I, 177-9.

² *Depositions*, I, 160-1.

³ *Depositions*, II, 120-1.

part of his Company were gotten aboard the said pirotte and soe were surprized together with the said ship *George*. They remained in the custody of the pirate until 3 February 'all which time she was not brought into any port or place whatsoever but beate to and againe at Sea'. In the end the pirate was robbed of his prey, but this was no comfort to the owners of the *George*, for she fell victim to a ship of Ostend.¹

One Bristol ship which was forced to take shelter on a harbour on the west coast of Ireland met with a far from friendly reception from the natives. The *Swallow* of Bristol was on a return voyage from the West Indies when she met with contrary winds and foul weather. The master related how 'she was forced for safeguard of the companies lives and for safty of ship and goods into a harbour or place on the west of Ireland called Valentia where presently vpon their arrival they were surprised with boates and men that came aboard them with all speed they could make to the number of a hundred and fifty persons or thereabouts and then with force and violence they seized on the said shipp and goods and tooke hir and made prize of all, and having stript this deponent and company of their cloathes and goods they turned them ashore without any thing to releive them. . . .'²

Although the life of a seventeenth-century seaman was full of dangers, it had its lighter and happier moments, which appear occasionally in the *Deposition Books*. One of the witnesses related how when he was pressed for service in the navy and went over to Dublin he met one Daniel Simons, a ship's carpenter, who 'fell acquainted with the young woman called Sarah that liued there at one Mr Dobbines not far from that place, and in short time after Married and toke her to wife'. They lived together for about three quarters of a year and after that the husband went to sea 'and what is become of him sithens he knoweth not. . . .'³ In another deposition, Daniel Huggins, a sailor aged twenty-five, gave an account of his friend's courtship and marriage in these words:

One John Barrow a seaman and acquaintance of this deponent came to this deponents house at seuerall times after the deponent was married and caused one Mary Brookebanke that then lay at the Swann not farr from the place where this deponent lived to be sent for, and there they had parley of love and marriage betweene them at seuerall times. And at one time in particuler, this deponent knoweth and was present in company with the said Berrow, and Mary Brookbanke at the signe of the Lambe Taverne in Tucker streete in Bristoll where also in company was this deponents wife and one William Prowt. . . and there after much parley and love betweene the said Berrow and Mary Brookebanke, and the said Prowt being aske by the said Berrow how he liked the said Mary to make hir his wife and the said Prowt (being an intimate friend of the said Barrows) as it seemed answering that he liked her very well and that she might be a good wife vnto him. He the said Berrow therevpon asked the said Mary Brookebanke whether she would have him or not and said he would be resolved of it before she went out of the roome, and therevpon the said Mary Brookebanke being fearfull of his constancy having bin deluded by one young man before, told him soe much

¹ *Depositions*, II, 144-5.

² *Depositions*, II, 14.

³ *Depositions*, I, 151.

there and asked whether he would be constant to hir and marry hir, and said that yf he would, then she would have him. And there vpon the said Barrow tooke hir by the hand and vowed, that he would have noe body but hir, and would be married to her very shortly, and said further to hir these words taking hir by the hand againe (vizt) Mary thee art mine and I am thine, and rehearsed it oftentimes, and said alsoe, I will make the furniture of xvil a yeare and yf it please God I should die before I marry thee, yet then shalbe sure of soe much.¹

They were subsequently married, but whether they lived happily ever after, history does not relate.

The wages of seventeenth-century sailors were extremely small in view of the extraordinary risks they ran. It is to be hoped that some of them were able to pick up enough profit from trade to ensure reasonable comfort in their old age. The sailors in the Royal Navy might, if they were lucky, get some relief in sickness or old age from the Chatham Chest. There was no such scheme for merchant seamen in general until towards the end of the seventeenth century, but in Bristol the Society of Merchant Venturers gave a good deal of help to the men whose courage and skill contributed so much to the city's profitable trade. It maintained a school for the children of poor mariners, it made a number of grants to help disabled sailors, and above all it supported an Almshouse for aged seamen and seamen's widows. Originally this almshouse had been erected by the Guild of Mariners and was supported by contributions from the sailors themselves. In the first part of the century there was still a levy of a penny a pound on wages and three halfpence a pound on merchandise to keep the almshouse going, but later these levies seem to have disappeared, and the Merchants' Almshouse was maintained entirely from the funds of the Society. In these and other ways the merchants of Bristol made some recognition of the services of the brave men who sailed in their ships three hundred years ago.

NOTE. There are few references to the dates of launching of merchant ships in seventeenth-century Bristol. Duplication of names, omission of the port of registration, the practice of naming new ships after earlier vessels, the long lives enjoyed by some of the ships, and variations in estimates of tonnage make identification difficult. The following list gives the years in which the ships mentioned above appear in the depositions: The *Adventure Frigate* (1660); the *Amity* of Bristol (1655); the *Bristol Merchant* (1647, referring to 1637); the *Bonaventure* (1660); the *Bordeaux* of Flushing (1647); the *Elephant and Castle* of London (1646); the *Elizabeth* (1655); the *Endeavour* (1660); the *George* of Bristol (1654); the *George* of London (1646); the *Happy Entrance* (1651, referring to 1648); the *Leopard* of Bristol (1654); the *Little John* of Bristol (1646); the *Long Jonathan* (1644); the *Love's Increase* of Bristol, alias the *St Patrick* of Ross (1658); the *Marigold* (1643); the *Mary* of Bristol (1653); the *Mary and Francis* of London (1654); the *Mary Rose* (1650); the *Mayflower* (1646 and 1653); the *Nevis Merchant* (1673); the *Peter* of Bristol (1674); the *Peter and Mary* of London (1646); the *Pleasure* of Chanksbury (1653); the *Prosperous* of Bristol (1647); the *Robert* of Bristol (1650); the *Rutter* of Amsterdam (1646); the *Sarah* of London (1665); the *Swallow* of Bristol (1650); the *Swallow* of Ilfracombe (1654); the *Swallow* of Virginia (1644), referring to 1639; the *St Patrick* of Ross (see the *Love's Increase*); the *Samuel Pink* (1653); the *Trial* (1654); the *William* (1651); the *William* of Bristol (1645, referring to 1642); the *Unicorn* (1653).

MYSTERIES AND NEMESIS OF THE NEMI SHIPS

By G. B. Rubin de Cervin

THE Nemi ships have come and gone, but still little is known about them; for not one of the many chronicles which relate the deeds of ancient Rome gives any mention of the two craft that once plied the sombre waters of that lake; not a word is to be found in the *Corpus Inscriptiones Latinarum* and no trace in the *Corpus Numorum*. Yet in spite of this, the tales which reported the existence of strange ships lying deep below the *Speculum Nemorensis* survived during the dark Middle Ages, being duly handed down from father to son by the local fishermen who dwelt upon those shores. Then came the days of the Renaissance when a wealthy humanist, the Cardinal Don Prospero Colonna, Lord of Nemi, conceived the ambitious plan of bringing these craft to light once more (1446). How his attempts failed, as did many others which were to follow in the next few centuries, is a well-known fact,¹ though they greatly contributed to keep the problem of their salvaging always very much in the news. However, it was only in 1927 that the problem was seriously tackled and finally solved by lowering the waters of the lake, which in fact were drained by using one existing Roman *cuniculum*, which unexpectedly had been discovered during the early stages of the work. Thus by 1932 both hulls had been hauled out of the mud and successfully beached under a temporary shed, so that now for the first time historians were confident that many problems of Roman naval archaeology would at last be solved. But this was not to be, for it soon became apparent that the Lake of Nemi, while surrendering the two relics which had been hidden away for so many centuries, would not yet reveal any of its major secrets. Once more let us consider a few of these.

Three lead pipes (*fistulae*), which were found within the first craft bearing the inscription C. CAESARIS. AUG. GERMANIC., together with a number of bricks stamped with the trade-mark belonging to a *Marciana* factory² of about the same period, induced many to believe that the ships had been built under the reign of that Emperor. Such an assumption was also based on the words of Suetonius who claimed that this Caesar:³ 'In reckless extravagance outdid the prodigals of all times. . . , he also built Liburnian

¹ G. Ucelli, *Le Navi di Nemi*. Libreria dello Stato, Roma, 1940. See also: *The Mariner's Mirror*, Vol. xv, no. 4, 1929: 'The Roman Galleys in the Lake of Nemi', by G. C. Speziale.

² G. Cozzo, 'I laterizi ed i bolli doliari delle navi di Nemi', in *Ingegneria Romana*, 1929.

³ Suetonius, *The Lives of the Twelve Caesars*. *Gaius Caligula*, p. 189. The Modern Library ed. N.Y. 1931.

galleys with ten banks of oars, with sterns set with gems, particolored sails, huge spacious baths, colonnades and banquet halls, and even a great variety of vines and fruit trees. In these he would feast even in daytime amongst singers and dancers as he coasted along the shores of Campania.' But just the fact that our historian, while describing every minute act, private or public, good or bad, of the twelve Caesars who were taken under his scrutiny, failed to make any allusion to such an outstanding accomplishment, as would have been the launching of the two ships high up within the crater-lake of the Alban hills, is sufficient proof that such a feat cannot be ascribed to the man whose surname was to be Caligula. Besides, neither the lead *fistulae* seem to supply any corroborative evidence, for many other examples are known of parts of older buildings being used over again for the making of new structures, nor the large quantity of coins found within the two hulls, could somehow help to reach any definite conclusion, as some pieces showed the effigies of Augustus, others those of Caligula, Claudius, Agrippa, Nero, Vespasian and Domitian, down to L. Verus Armenicianus (of whom 13 coins came to light off the starboard bow of hull no. 1, and are dated at about A.D. 164). Such a variety of coinage makes a very confusing picture, so that from this evidence it is practically impossible to set a definite date, for it is well known that many types of coins, which were issued during one reign, were still in circulation under others of much later periods.

The true purpose of these ships remains still somewhat obscure. The fact that they were two in number, caused some scholars¹ to suppose that they were to be employed in sham naval combats, the *naumachiae* being much in favour in ancient Rome, although no offensive or defensive weapons were found in or around the two hulls; besides, the fragile tiles and the abundance of delicate decorations obviously all point out that they were not meant to stand the rude shocks which inevitably would have come in the course of boarding-skirmishes. On the other hand, the many earthenware pipes, discovered within the *pavimenta sectilia* of the decks, are suggestive of extensive drainage and sanitation fittings and induced some to imagine that the Nemi craft were only floating *thermae* or *balnea* establishments, or merely pleasure house-boats for the benefit of members of the Palatine court. Many similar examples can be named, such for instance as the seventeenth-century gaily decorated Japanese *Atake Maru*, which was known to carry on her deck a three-storied pagoda. Others² still were of the opinion that the ships had been built by military engineers within the enclosed shores of Lake Nemi, so as to carry out secret naval experiments, a theory which somehow failed to take into consideration the fact that at that time no foreign sea-power was

1 G. C. Speziale, *loc. cit.*

2 M. Janni, 'Del primo intento costruttivo delle navi di Nemi,' in *Le Navi di Nemi*, *op. cit.*

threatening the *pax Romana*. Finally, a much favoured opinion¹ conceived the possibility of a relationship between these ships and the goddess Diana Aricina, whose temple once stood on the northern fringes of the lake, the two craft in this case being mere floating shrines meant to ferry across worshippers during propitiatory rites which, following a very ancient Latin tradition, were celebrated during the Ides of August.

The building of the ships most likely was achieved *in situ*, for a considerable quantity of square-cut blocks of travertine stone, possibly parts of the necessary foundations for docks or slipways, were revealed during early stages of the drainage process, a fact which would seem to exclude any suggestion that the two craft had taken shape in one of the existing naval yards, and then had been carried from the Tiber or Miseno arsenals, over plains and hills, down to the pit of the crater-lake.

When measured, both proved to be about the same size,² though some difference was noticeable in the shape of the prows (or what remained of them); furthermore, on the sides of ship no. 2, parts of what could have been the *apostis*, were still there in considerable number, while no trace of any such arrangement could be observed upon the other hull, and this is suggestive that one craft might have supplied the motive power for the other. Pliny the Younger³ recalls also the case of the Emperor Domitian who, incapable of bearing any disturbing noise, such as the splashing of oars when he would go sailing around Lake Albano, had his craft towed at some distance by a galley. One other peculiar feature of this same ship was that at her bow fittings were discovered for two more side-rudders, perhaps an indication that she was a double-ender capable of working both ways. There are two remarks in the works of Tacitus⁴ which bear on the subject, although the craft which he mentions seem to have been rather unusual and outside Roman shipbuilding tradition.

What caused the foundering of these ships remains yet another enigma. The late Commander Speziale⁵ pointed out that possibly during a severe gale both ships, having parted their cables (two anchors in fact were located

¹ G. Ucelli, *op. cit.*

² L. Tursini, 'Note di architettura navale Romana', in *Le Navi di Nemi*, *op. cit.* p. 369. Dimensions are given as follows:

	Ship no. 1	Ship no. 2
L.O.A.	233' 9"	239' 4"
L.W.L.	220' 10"	226' 2"
Main-beam	65' 7"	47' 1"

³ C. Plinius Caecilius Secundus, *Panegyricus Traiano*, p. 85, 1-3.

⁴ C. Tacitus, *Germania*, c. 44/6 and *Annales*, liber II. c. 6. On the subject see also A. Jal, *Archéologie Navale*, *mémoire* 2, p. 121. A. Bertrand, Paris, 1840.

⁵ *loc. cit.*

at some distance from the hulks), had been driven ashore, and being top-heavy, had keeled over under the pressure of the wind and finally had sunk; yet when the hulls had showed out of the receding waters, neither was found on its beam-ends, but both firmly stuck into the mud at a moderate angle of inclination. The discovery of a *fungus xilophagus*,¹ which was revealed during chemical tests of the timbers, but had ceased to exist, it was proved, as soon as the hulls had become water-logged, seems to indicate that at that same date, the ships had probably been left without governance and safe-keeping and allowed to rot at their moorings. Whatever may have been the cause of their total loss is a matter of speculation, and it is wondered whether this took place after Caligula's tragic end (if such an attribution is accepted), when his successor Claudius banished his name and annulled all his acts,² or whether the decay and consequently the destruction was due to the spreading of Christianity which gradually was disposing of all Pagan rites? However, the finding of a small boat (a *ymbula* very likely) off the stern of hull no. 1, stacked to her gunwale with pottery and bricks bearing the same stamps as those found within the ships, is proof that anyhow much looting had been going on for some time, before the ships had finally gone to the bottom.

NEMESIS

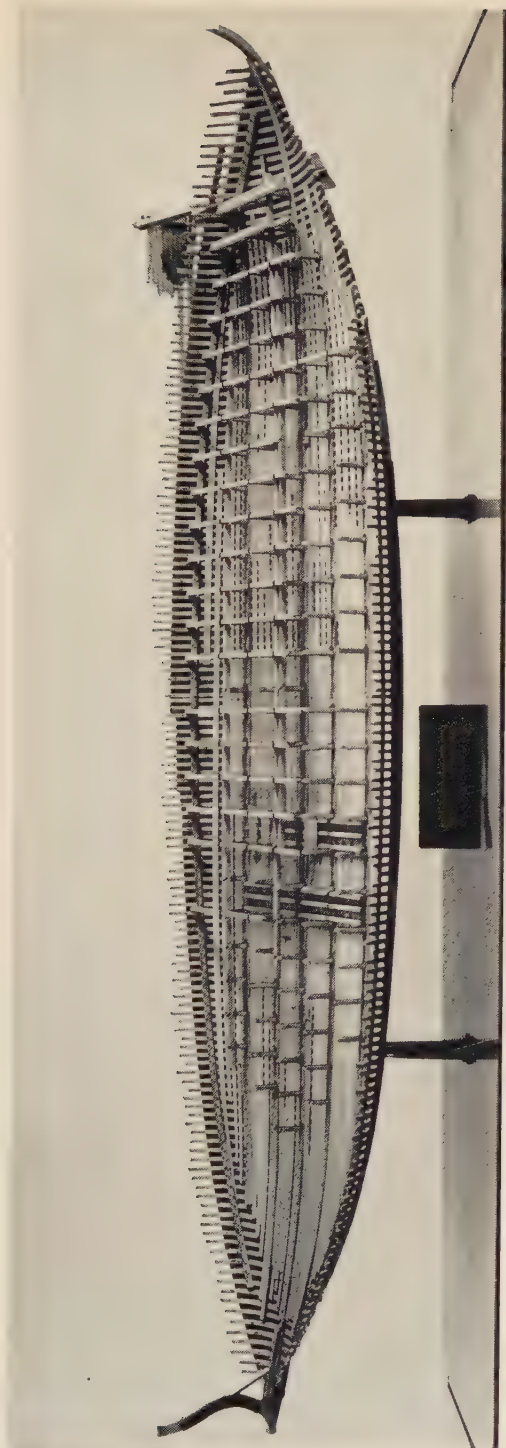
By 1939 both ships had been safely set up in what was thought was going to be their permanent home, while at the same time careful historical and archaeological research work was started on them. Thus within the new spacious halls it became possible to examine perfectly all the underwater sections or, by means of a raised gallery, to take in the powerful beams and ribs and what was left of the deck fittings and holds. Then war suddenly came to the shores of Lake Nemi and the whole Alban Region was enveloped in the battle for Rome. On 31 May 1944, while Allied troops were about to close in, the surrounding hills and the very Museum grounds underwent heavy air-bombing and gun-fire, four shells actually going through the concrete roofs of the buildings, though causing insignificant damage, and all this while a Werhmacht anti-aircraft battery stationed nearby, was busy answering the fire, which it kept up until 20.15 hours. That same night at 22.00 hours, smoke was suddenly seen bursting out of the windows and it was not long before the entire structure was turned into a blazing furnace. Two days later, when the four Museum keepers, who according to their statement, had been ordered away by the Germans and had taken to the hills, were allowed to set foot in the buildings, both ships were but a heap of ashes

¹ C. Sibilia, 'Ricerche botaniche sul legname delle navi di Nemi,' in *Atti del II Congresso Naz. di Studi Romani*, 1931.

² Suetonius, *op. cit.* p. 215.

and rubble. A report issued by the Italian Ministry of Public Instruction, dated 21 July 1945, following an inquiry, assumed that the German forces were to be considered responsible for the destruction caused. Such a grave accusation was later emphatically rejected by Prof. H. G. Evers, at that time head of the Kunstschutz section of Italy. How the fire had started or by whom it had been wilfully lit, is another unexplained mystery.

The battered and charred buildings which formed the Nemi Museum, after having been completely repaired, were officially opened to the public on 25 November 1953, for two newly built models, exact replicas of the originals, one-fifth of the scale, have replaced the former Roman ships, together with the many bronze ornaments and all the other relics which, having been in time removed to safer places, had escaped destruction. It is hoped that all other documents related to Roman naval architecture will in the near future find their way there. Another model, faithfully reproducing on a minor scale every detail of hull no. 1, is now in the Museo Storico Navale of Venice.

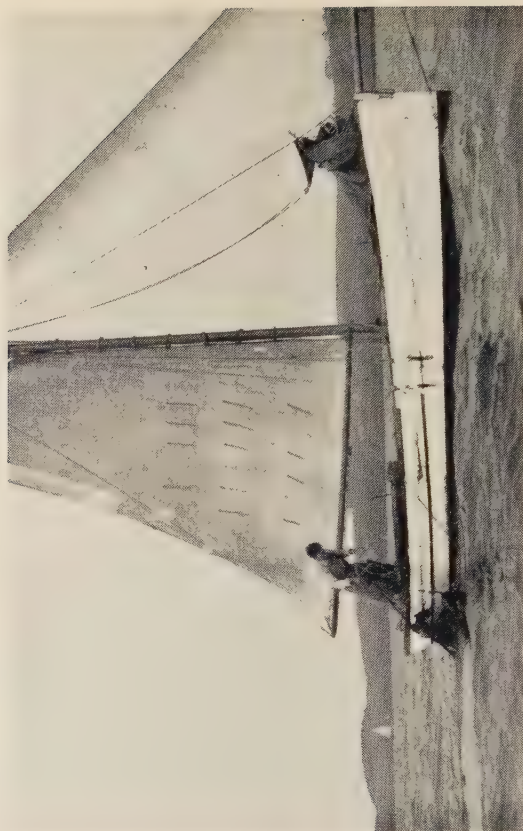


SCALE-MODEL OF NEMI HULL, NO. 1.
(Museo Storico Navale, Venezia)



FALMOUTH OYSTER DREDGERS

On board a sailing vessel, showing table and a dredge.



(Photographs by H. O. Hill)

FALMOUTH OYSTER DREDGERS

A sailing dredging vessel. Lifting a dredge on board.
The table is just forward of the dredge.

NOTE ON THE FALMOUTH OYSTER DREDGERS

By H. Oliver Hill and Basil Greenhill

THE chief oyster beds of the River Fal and its adjacent waterways are in those parts of the river system which come under the jurisdiction of the Truro City Council, and a licence to dredge has to be obtained from that authority at the beginning of every season. On the licence it is specifically stated that no mechanical means of propulsion is to be used by a boat working on the oyster beds. For this reason the local dredgers are all sailing or rowing boats. There were twenty sailing smacks at work on the beds in the 1953/4 season out of a potential fleet of twenty-two. Besides these twenty-two working sailing boats there are in the Falmouth area two more boats which have been laid up for a number of years, and ten boats of a type suitable for oyster dredging and which have been dredging from time to time, but which are used principally for pleasure purposes. Of these ten, eight have scarcely been altered from their original form as dredging boats and could easily be brought back into service if market conditions at any time make it worth while to do so. They include the *Tern*, the newest boat in the fleet.

These sailing boats are not all of quite the same type. At least eight of them were specially built for dredging, but at least eleven more were built as Luggers for crabbing and general inshore fishing work. A number of these Crabbers were built at Porthleven, and it is perhaps worth bringing out here that these smaller west-Cornish Luggers were transom-sterned craft in contrast with the larger mackerel drivers, the pointed sterns of which are usually quoted as one of the facts distinguishing them from the craft found east of the Lizard. One of the largest boats in the fleet, the *Morning Star*, was built as a Seine Boat. She is thirty-four feet overall, and is reputed to be the oldest working dredger. Her owners claim she is over 100 years old.

The sailing dredger boats all carry the same canvas, mainsail, two headsails, and a jackyard topsail for summer use in regattas, and perhaps for mackerelling in light airs. Most of the boats have also a big reaching foresail for use in regattas in place of the smaller working foresail. The oyster dredging season lasts from 1 October to 31 March. Out of season, besides mackerel fishing, some of the boats ply for hire by visitors, and others perform the general duties of watermen's boats. Many of the owners of these boats favour the regulation which prevents the use of motors while dredging for oysters. Their belief is that if engines were allowed the whole of the beds

would be ruined in one season. Mr Jim Morrison, who sails the *Mayflower*, the boat used in the series of ciné film records of the dredger's work and life, which the Photographic Records Committee are making for the Society, has expressed the opinion that the slight leeward drift of a sailing boat is an advantage because the dredges tend to be towed over the quarter, instead of astern, which makes this operation easier.

Further control of the dredging of the beds is imposed by the limitation of dredging hours to between 9 a.m. and 3 p.m. With each dredging licence is supplied a brass ring $2\frac{5}{8}$ inches in internal diameter and any oyster which will pass through this ring must be returned to the water. A day-long patrol by a water-bailiff in a motor-boat helps to ensure that the dredging rules are observed.

Besides the sailing boats in the 1953/4 season there were sixty rowing boats at work on the oyster beds. These are mostly carvel craft of from 14 to 16 feet in length, built locally for the trade. They are fitted with outboard motors with which they travel to the oyster beds. In the past they were rigged for this passage working with standing lugs on main and mizzen, but in March 1954 only one pulling boat still habitually sailed to her dredging grounds.

For dredging each sailing boat is equipped with a movable board hinged to her bulwarks on the weather side and known as the 'table', and a number of dredges. These dredges are shaped bags, made out of $2\frac{1}{4}$ -inch wire rings, with a metal bar, called a 'knife', at the mouth to scrape up the oysters. Most boats are single-handed and work two dredges, two men can work three or four dredges, three men in a large boat could work six. The dredges themselves vary in size and are not all of the same size in one boat. A dredge is measured by the number of rings it has in its top row; an average dredge is of 15 rings, a small one of 12 and the largest normally used of 19, though there are 22 ring dredges. The depth of the bags from knife to the wooden 'stick' at the closed end is 8 rings. The 'knife' and the metal frame for the mouth of the dredge, together with the iron bars, 3-4 feet long, between the mouth of the dredge and the end of the tow line, are all made up by the blacksmith at Mylor Village. The fishermen make their own wire net bags. In a sailing boat the ideal conditions for dredging are to have the wind on the beam and the tide just striking aft of the weather beam; in a pulling boat the wind and tide should be going the same way and the tow if possible is always against the tide. The actual operation of dredging is known as a 'drift', and when a sailing vessel sails back to start another series of dredgings she is said to be 'sailing back over the drift'. When starting a drift a dredge is thrown overboard at once and then another, and if in a two-handed boat a third dredge will be used as well. All this will have taken about 4 to 5 min.,

and it is now time to haul the first dredge aboard. The contents are emptied on to the 'table' and the dredge is then at once put overboard again. The result of the first dredge is then examined and sorted out, the oysters of the right size are put in the bucket kept for this purpose at the side of the table. If the shells have a lot of mud or heavy marine growth on them this is cleaned and knocked off on to the table; when all the oysters have been sorted out the table is tipped up and the refuse shot back into the sea over the side. Now it is time to haul in the second dredge, and the same process is gone through as before, then the third and, as soon as number three is in the water again number one is hauled for the second time. Once the dredges are down there is no let up at all, it is haul, empty, put overboard, sort, empty table, then haul again until the vessel has sailed to the end of that particular drift. Then it is up with the foresail, which has probably been dropped for the actual drift unless the wind is very light, and sail back over the drift as quickly as possible. Then the previous process starts all over again.

In a pulling boat the work is even more tiring, as there is not even the break of sailing back over the drift. Here the dredge is not pulled over the ground by the boat being rowed but by the boat being hauled up to an anchor, which has been previously dropped, by means of a small winch or 'wink' as it is locally called. This 'wink' is made of wood and is turned by means of a series of spokes, which are stuck in one end of the winch like the spokes of a wheel. The fisherman grasps one spoke with one hand, pulls on it and as the next spoke comes up grips that with the other hand and so on, alternate hands thus pulling the boat up to its anchor. Before doing this, however, the anchor is dropped over the bows of the boat, the anchor rope being round the 'wink' and led through a timber upright, forked at the top end, in the bows of the boat. The anchor cable is then paid out off the drum of the 'wink' and the boat drops astern, the amount of cable paid out may be as much as 60 fathoms and the greatest depth of water would be 6 fathoms. Having paid out the 60 fathoms, or whatever quantity is being used for that particular drift, the dredge is put over the stern. Some of the pulling boats use two dredges but the majority only one. On the stern of the boat is a short length of wood projecting horizontally over the water with a forked piece at the outboard end to act as a fair lead for the headline from the dredge to the winch. If the boat was working in the maximum depth of 6 fathoms there would be 15 fathoms out on the dredge rope. This dredge rope leads for'd as has been said, to the 'wink', but to a separate barrel or drum to that one which has the anchor cable on it. The two drums are on the same spindle but are worked independently, the spokes for the dredge barrel appearing in the middle of the whole machine, while those for the anchor rope are on the extreme left-hand side. Having dropped the dredge, 15

fathoms, or the amount necessary, is paid out from the starboard drum of the winch and at the same time the fisherman will haul in on the anchor rope which is operated on the left-hand or port side of the 'wink', the dredge running free or free wheeling. When the required amount is out on the dredge line, the starboard side of the wink is fixed and the boat is pulled up to its anchor by means of the port-side drum of the winch, towing the dredge. Having arrived as far as the anchor the dredge is hauled in up to the boat by the starboard winch and then pulled aboard and emptied out, on to the table in the stern sheets of the boat. Thus the drift is completed.

A pulling boat does on the average 30 to 40 drifts in one day, whereas a sailing boat averages 8 or 9 drifts in the 6 hours, each very much longer. Some of the pulling boats instead of using the spoke type of winch operate the winch by means of a cranked handle projecting out of the end of the spindle. This is easier to work as it can be done with one hand, and when one hand and arm is tired the other hand and arm can be used, whereas with the spoke method both hands are used together.

The sailing boats work in pretty much the same depth of water as the pulling boats, that is 6 fathoms as a maximum—sometimes in only 5 to 6 feet of water, with 15 fathoms out on the dredge. In a sailing boat there is a buoy made fast to the inward end of the dredge rope in case the dredge has to be slipped in a hurry through being caught up in a rock or any sort of obstruction. As an extra precaution the dredge rope can be made fast to a stopper of weak line so that it parts if the dredge gets fast. The dredges are spaced evenly along the weather side about six feet apart, starting with one over the stern.

The oysters, which are the produce of all this labour, being of natural growth are called in the trade 'Fal Natives'. At the end of a day the sacks of oysters are put in a punt which lies anchored off Flushing. The contents of each bag have been counted by the fishermen and the number of oysters delivered on board the punt is notified by word of mouth to the foreman of the buying company—there is no further check. The dredged oysters, now the property of the buying company, are laid down in pens just off shore and left to fatten for 1 to 3 years. Then they are dredged up again, cleaned in running fresh water, and sent away to London and provincial markets for sale retail.



HEAD AND STERN OF THE *FORESIGHT* OF 1650. SKETCHES ON
THE BACK OF THE CONTRACT

DOCUMENT

A COLLECTION OF SHIPBUILDING CONTRACTS

Contributed by R. C. Anderson

Among the comparatively recent acquisitions of the National Maritime Museum is a somewhat damaged calf-bound volume lettered 'Ships Contracts'. The title is hardly adequate, because the first thirteen sheets are not concerned with contracts, but with the shapes and sizes of the timbers required for the framing of ships. These are printed, or rather engraved, but the rest of the volume is, as one would expect, in manuscript.

I mentioned this volume in a Note in *The Mariner's Mirror* for May last in an attempt to justify my previous statements as to the difference between the framing of 'Navy Board' models and that of actual ships, and then gave the essential parts of the very long title of its printed pages, which probably date from somewhere about 1700. Now it seems worth while to give a more complete description of the rest of the book and to print the earliest of its contracts in full.

Altogether there are eleven contracts or preliminary drafts for contracts. Two of them are merely charter-parties for the hire of ships to carry stores, but the remaining nine are more or less detailed specifications for building or rebuilding men-of-war, and in every case but one it is possible to identify the ship or ships concerned.

The first contract (8 July 1702) is for three 50-gun ships, the *Leopard*, *Panther* and *Antelope*, all launched in the following year. The next is of much earlier date (24 December 1649); it is for the *Foresight*, one of the first Commonwealth 'frigates', built by Jonas Shish at Deptford. Then, after the two charter-parties, comes a contract (27 September 1699) for the rebuilding of the *Hampton Court* 70 at a price of £11 a ton. This is followed by a draft of one of 1689 (no month given) for a ship 93 ft. on the gun deck and 24 ft. 8 in. outside beam, 'a frigate which he shall make a fireship'; the keel for tonnage, is to be 78 ft. 'and no more'. As no builder's name is given and there were a dozen similar fireships launched in 1690, it is impossible to put a name to the ship, but it may be noted that only Johnson with the *Strombello* managed to keep the keel-length down to the figure specified. Another draft of 1702 is for the three 40-gun ships *Lark*, *Hector* and *Greyhound*. It is followed by a very detailed contract (17 May 1693) for the 80-gun *Newark*, built by Frame at Hull, though in view of the fact that he had only very recently launched the *Humber* of the same class one might have expected something in the nature of 'band as before'.

I ought to explain that it is only in the case of the two rebuildings, those of the *Hampton Court* and the *Warspite*, the next contract (1 December 1701), that actual names are given. The others have been supplied by a consideration of what ships were actually built and by whom. Such is again the case with the last two contracts, one (8 January 1693/4) for two 60-gun ships to be built by Snellgrove and to measure 145 ft. by 37½ ft. the other for two 48's measuring 130 ft. by 34 ft. to be built by Johnson. This is undated, but there can be no doubt that the ships were the *Blackwall* and *Guernsey* of 1696, while Snellgroves' two ships must have been the *Pembroke* and *Windsor*.

The two contracts for rebuilding differ widely. That for the *Hampton Court* is quite

brief and stipulates that the builder shall 'take down and remove all the old decayed materials. . . until there shall none remain (except what is good for a new ship) and will from the bottom or any part so remaining make a new ship of the same size'; while the document dealing with the *Warspite* is the longest of the series and is quite as detailed as those for new ships. In both cases it was laid down that payment was to be based on the tonnage *before* rebuilding, but whereas the *Hampton Court* merely gained a few inches in beam, the new *Warspite* was also $5\frac{1}{2}$ ft. longer than the old.

Of these documents the contract for the *Foresight* is perhaps the most important because of its early date, and this I am printing in full, but that for the *Newark* is still more detailed and would repay careful study. Among other things it gives the number of ports on each deck; lower deck 28 and 4 aft, upper deck 28 with 2 forward and 4 aft, forecastle 6 with 2 forward, quarter deck 16, poop 4. It also speaks of 'a large quarter or half deck', an expression which confirms a suggestion made by me as long ago as 1919 (p. 12) in the course of what I can now admit was an intentionally provocative article on the arrangement and nomenclature of decks.

In view of the date of the contract for the *Foresight*, 24 December 1649, it is interesting to note that the Navy Commissioners wrote to the Admiralty Committee on 4 January 1649/50 to say that they had that day agreed with Commissioner Pett to build two frigates at £6. 10s. *od.* a ton and that the other shipbuilders had 'fallen in with this'. It would seem that Shish, at least, had accepted this price already, and that Pett followed rather than set the example.

APPENDIX

Contract for building the Foresight of 1650

This Indenture made the 24th day of December 1649 between John Holland, Thomas Smith and Robert Thomson, Commissioners of the Navy, for and on the behalf of the State of the one part and Jonas Shish of Deptford in the County of Kent, Shipwright, on the other part—Witnesseth that the said Jonas Shish for the Consideration hereafter in these presents mentioned and expressed: Doth covenant, promise, grant and agree to and with the said John Holland, Thomas Smith and Robert Thomson for and on the behalf of the State, That the said Jonas Shish, his Executors, Administrators, Servants or Assigns shall and will at his and their own charges well and workmanlike erect and build off the stocks for the use of the State One good, strong and substantial new ship or frigate of good, sound, well seasoned timber and plank of English oak, elm and beech. And that the said ship or frigate shall be of the dimensions hereafter mentioned and shall be erected and built in manner and form following (that is to say)—The said ship or frigate shall contain in length by the Keel 100 ft. Breadth within the plank [29 ft. 6 in.] *31 ft without the plank.*¹ Depth under the beam 11 ft 6 in *by a right line.* Breadth at Transom 18 ft. The Rake fore and aft to be 23 ft. The said Keel to be 14 in square, to have long scarphs tabled and to be well bolted with a bolt of [3/4] *one inch* auger, the bottom to be sheathed with a 3 in plank. To have a firm, substantial Stem with a sufficient false stem of [6] 7 in thick and 20 or 22 in broad. To have a substantial Sternpost of 18 or 20 in deep with a long-armed knee, to be well bolted with an inch [and 1/8]² bolt fastening the same together. The space of timber and room to be 2 ft 2 in *at the most.* The floor timbers of the ship to be 14 in 1/2 up and down upon the keel and [10] 11 in in and out at the rung-heads³ *at the bearing and 10 afore and abaft.* The navel timbers⁴ to fill the rooms and to

1 Words or figures given between square brackets have been crossed out in the original; those given in italics have been added. In the present case it would seem that the words 'within the plank' ought also to have been crossed out.

2 'One eighth' is expressed here and elsewhere by the words 'half quarter'.

3 MS. wrong heads.

4 Later contracts show that 'navel timbers' were the same as the lower futtocks.

have at the least $5\frac{1}{2}$ ft 6 ft scarp. The timbers upwards at the Gun Deck to be 8 in in and out and to have the like scarp and the rooms to be filled with timber. To have a substantial Kelson 14 in up and down upon the Keel and 16 in broad and to run fore and aft, to be well bolted by a [$1\frac{1}{2}$] 1 $\frac{1}{4}$ in auger through every timber and through the Stem. To put in 6 strakes of Sleepers in hold on each side the rung-heads of 6 in thick and 15 in broad, 3 of them to be 7 in thick on the bearing amidships¹ and to run fore and aft. Two strakes of middle bands² on each side of 5 in thick and 15 and 16 in broad, to run fore and aft. Two strakes of Clamps each side fore and aft under the beams of the Gun Deck of 6 in thick and 16 in broad, to be hooked one into and tabled one into the other³ for retching,⁴ and all the rest of the foot-waling in hold to be of good 3 in plank, with a floor-rider for the step of the mainmast and pillars in hold under the beams. The Beams of the Gun Deck to be 14 in broad and 12 and 13 in up and down and 14 or 15 fore and aft and to lie [4 ft asunder] one under each port and one betwixt and to be kneed with 4 knees to each port beam (vizt) Two fore and aft hooked into the beams and two up and down and to be well bolted with 4 bolts in each knee of an inch auger. And to have a double tier of carlines on each side fore and aft of 6 in thick and 9 in broad, and the ledges to lie within 8 in of each other, and lay the said deck with long [spruce deal] plank of 2 in thick and by the side in the wake of the ordnance with 2 in plank and to have waterways of 6 in thick and 14 in broad. To put out 8 leaden scuppers on each side the Gun Deck. To make as many hatches in the hatchway as shall be convenient of 2 in plank with the hatchway abaft the Mast for the stowing of provisions and hatchway to the Steward's room and hatchway for the conveniency of the cook-room and for Boatswain's and Gunner's storerooms and powder-rooms. To make a manger on the same deck and to put in 4 hawse pieces and cut out 4 hawse holes. To place 2 pair of carrick bitts with cross-pieces and knees. To bring on 4 stranders⁵ on each side the Gun Deck and to shovel⁶ them with plank and to bolt them with 2 or 3 bolts in each arm of 1 in auger. To have [2] 1 strakes of spirket-wales⁷ on the same deck of 4 in plank fore and aft of [5] 6 in thick and one gunwale scored into timbers⁸ to the lower edge of the ports. To cut out 12 ports on each side the same deck with 2 abaft and to make and hang them with hooks and hinges and to fit and drive all ring-bolts, eye-bolts, rings and staples. To place partners for the main and foremast, partners and step for the main capstan with a step for the mizzen mast and to have turned pillars under the beams with staircase up into the quarter deck⁹ and stairs and ladders to all conveniences. To bring on 5 breast-hooks beside the step of the foremast with good long arms, to have 3 bolts in each arm and one through the stem by an inch and $1/8$ auger. To have as many transoms abaft below the ports as may be within 18 inches one of another and one transom

1 This last word uncertain.

2 Both sleepers and middle bands were strakes of internal planking or 'foot-waling' thicker than the rest. Manwaring says that 'the lowermost of these (sleepers) is bolted to the rung-heads and the uppermost to the futtocks'. Blankley, writing about 100 years later, gives sleepers as 'commonly 3 strakes of foot-waling thicker than the rest, wrought over the rung-heads'. Falconer (1769) describes this meaning of 'sleeper' as obsolete; while it is noticeable that both Keltridge and Battine (about 1670-85) mention middle-bands (which the others omit) and ignore sleepers.

3 Tabling is 'letting one piece of timber into another by alternate scores or projections from the middle, so that it cannot be drawn asunder either lengthwise or otherwise'.

4 *Sic* in MS. The meaning must, I think, be 'to prevent opening up lengthwise'.

5 Knees with one arm pointing upwards.

6 MS. 'shoewell'. Later Contracts have 'shovel'. The word appears in Steel's *Elements of Naval Architecture* (1805) as 'shole' and is defined as a piece of plank under a standard or under a shore. To the layman it suggests a combination of 'shoe' and 'sole'.

7 The planks inboard above the waterways.

8 This is 'gunwale' in its original sense, only given as an afterthought by Manwaring (1625) and ignored by Falconer.

9 Strictly this should be 'the space under the quarter-deck'. The same confusion often occurs with regard to the half-deck of later writers.

at the upper edge of the ports under the helm-port with good substantial knees with long arms with 3 bolts in each arm by an inch auger. To bring on risings¹ fore and aft of [3] 4 in thick *of oak* and 16 in broad under the beams of the upper deck and to ceil up between decks with 3 in plank fore and aft. The beams of the said deck to be 8 in up and down and 10 in broad and to lie between 8 and 9 ft asunder excepting in the wake of the gunroom and in the hatchway where to have 2 carline-knees, and to be in height between the said decks between plank and plank 6 ft 4 in in the midships and go flush fore and aft; [five] 6 of the said beams to be double-kneed with 4 knees to each beam, 2 fore and aft, the other up and down, and the rest to be kneed with 2 knees to each beam up and down and to be well bolted with bolts of $\frac{3}{4}$ and $\frac{1}{8}$ auger. To have one tier of long carlines fore and aft with sufficient ledges. To lay the said deck with good spruce deal and [to prime over the side with seasoned 3 in plank] to make a quick waist² with ports in the wake of the guns in the quarter; to lay 2 in plank with a spirketing of 2 in plank abaft the mast.³ To have coamings, head-ledges⁴ with a grating hatchway before and abaft the mast and a grating forward for the vent of the smoke of the ordnance. To fit topsail-sheet bitts, with cats, david, clasp of iron, partners for the fore capstan and partners for the mizzen mast, and to put out as many scuppers abaft upon that deck as shall be convenient. To make main and jeer capstan with capstan bars and iron pawls. To make a large quarter deck *and fore-castle and round house* with a bulkhead and doors with 2 ports in the same, and as many of the beams in the wake of the steerage, *fore-castle and round house* to be kneed as shall be convenient. And in the wake of the cabin to have a rising under the beams of [5] 6 in thick and the beams to be dovetailed and bolted into the same. To cut out 4 ports on each side under the quarter deck and 2 right aft and to make and hang port-lids with hooks and hinges *and ports in the fore-castle*. To have a transom abaft under the windows in the cabin and one in the wake of the ports and the same kneed and bolted, and to have as large a round house as the work with conveniency shall give leave with a bulkhead and door to the same. To cut out 3 ports on each side in the fore chase. To make all the platforms in hold with bulkheads and partitions (vizt,) for the powder room, Gunner's store-room, sail room, Boatswain's store-room, cook room, with cabins and conveniencies for lodgings, Carpenter's and Steward's store-rooms, fish room and conveniencies for the Captain's provisions, with bread room and ceiling the same. And without board the ship to be planked up from the keel to the chain-wales with [3] 4 *three*⁵ in plank *throughout* excepting [three] *four* strakes of 4 in plank, vizt. one below the wale, [one] *two* between and one above the wale. And to have two firm wales of 11 in up and down and [7] 8 in thick and chain wale of 5 in thick and 10 in broad, to be inbowed,⁶ and the work upward so high as the waist to be wrought upward with 2 in plank and the quarter with spruce deal [landed work]⁷ or 2 in plank. To have a fair head with a firm substantial knee and cheeks, treble rails with trail-boards, beast and brackets, kelson and cross-pieces and supporters under the cats. To have a fair lower counter with rails and brackets, stern gallery with carved work and brackets, windows and casements into the cabin. To have a fair upright with a complete pair of Arms, cherubin heads, pilasters and terms. To have a fair pair of turrets⁸ with windows into the cabin complete. To have a pair of chesstrees with fore and main chain-wales⁹ well bolted with chain-bolts and chain-plates. To have a rank gripe well bolted with dovetails and a stirrup on the

1 Heavy fore-and-afters under the beams, the same as the 'clamps' of the lower deck. In all probability the 'rivesinges' of the Southampton galley of 1295 (*M.M.* 1928, p. 235).

2 Falconer gives as a secondary meaning of quick-work 'that part of the side which is above the sheer-rail.'

3 Possibly the stop should be placed after the word 'ports', but I think what is printed is more probable.

4 'The thwartship pieces which frame the hatchways' (Steel).

5 *Sic* in MS.

6 To be given tumble-home?

7 Clench-work or weather-boarding.

8 Quarter-galleries. MS. terretts.

9 It will be noted that there is no mention of chain-wales for the mizzen.

keg well bolted. To make and hang on a complete rudder with braces, gudgeons and pintles with a muzzle¹ for the head and a tiller thereto. To rail and gunwale the said ship fore and aft with brackets, and hansas-pieces complete. To make a complete suit of masts with caps and crosstrees, yards, bowsprit, topgallant masts, flagstaff and ancient-staff; all the said masts and yards to be ready made fit for a ship of that burden. Likewise to do and perform all the carved work and to find and provide all the materials for the same. Likewise all the joiner's work, finding deals, locks, hinges for doors, settle-beds and cabins with workmanship thereunto, both within board and without, and to plane the said ship all over under water. All plumber's work, as lead and leaden scuppers etc. All glazier's work, slot glass² for casements and scuttles for cabin windows etc. All painter's work for painting and gilding within board and without; and to do and perform whatsoever belongs to the carpenter to do for the finishing and completing of the hull in like manner as is done and performed to the like frigates in the State's yards.

And the said Jonas Shish for himself, his executors and administrators doth covenant and undertake at his or their costs and charges to find and provide all manner of iron-work, bolts, spikes, nails, brads etc, likewise all timber, plank boards, treenails, white and black oakum, pitch, tar, rosin, hair, oil, brimstone and all other materials that shall be needful to be used or spent in or about the works and premises aforesaid for the complete finishing thereof; and in like manner to discharge and pay all manner of workmanship touching all and every part of the work herein expressed to be done and performed. And to finish, complete and launch the said ship or frigate into the river of Thames to and for the use of the State as aforesaid on or before the last day of [July]³ now next ensuing the date of this present indenture: Provided that, if at any time during the building of the said ship or frigate herein contracted for according to the dimensions, proportions and scantlings herein expressed and set [down] forth or intended to be expressed or set forth there shall be found and discovered upon due survey to be made thereon by such persons as shall be thereunto appointed any unsound and insufficient timber, plank or other materials or any insufficient workmanship and performance prejudicial to the State, that then after due notice thereof given in writing by the said Surveyors to the said Jonas Shish or to the chief master workman under him there shall be an effectual and speedy reforming of all and every such defaults in stuff or workmanship and that the said amendment or reformation shall be certified in writing by the said Surveyors to the said Commissioners of the Navy for the service of the State in this behalf.

And the said John Holland, Thomas Smith and Robert Thomson for and on the behalf of the State aforesaid covenant and grant to and with the said Jonas Shish, his executors, administrators and assigns by these presents: That they the said John Holland, Thomas Smith and Robert Thomson or some of them for and on the behalf of the State shall according to the custom of the Office of the Navy sign and make out bills to the Treasurer of the Navy to be paid to the said Jonas Shish, his executors, administrators or assigns for the sum of six pounds and ten shillings per ton for every ton that the said ship or frigate shall be of in burthen, being measured and calculated according to the accustomed rule of Shipwright's Hall,⁴ the said payments to be made in manner and form following (that is to say): Two third parts of the whole in money and one third part in timber, to be valued as is hereafter mentioned. And it is agreed that the first two thirds in money shall be paid at four payments as followeth, vizt. One fourth part at the ensembling of these presents, one other fourth part when all the lower futtocks are in and fastened, one other fourth part when all the tier of top-timbers are in, both the wales on and the lower deck laid, and the other fourth part or what is shall amount to within ten days after launching and finishing of works respecting the hull, carving, joining or painting fit to be done after the launching, And for the other third

1 As a guess, the iron strap on the rudder-head.

2 This may perhaps mean glass in small leaded panes.

3 No date substituted.

4 $K \times B \times B/2 \div 94$. Actual keel to the 'touch' and beam outside the plank. The older formula was $K \times B \times D \div 100$. This contract provides an early instance of the new method; the way in which plank beam has been substituted for moulded beam in the stipulated dimensions shows that it was prepared at a time of change.

part of the whole agreed as above-said to be paid in timber it is agreed that the same shall be paid in manner following, vizt. either by so many trees to be assigned by the said John Holland, Thomas Smith and Robert Thomson to the said Jonas Shish or his assigns out of one or more of the late King's parks and chases by or before the first of March next, the said trees to be valued by two or more of us the Commissioners of the State's Navy, which valuation, if it be disliked by the said Jonas Shish, then the said third part to be paid in money by or before the first of June next. Lastly for all such sum or sums of money that shall grow due by virtue of this Contract the said Jonas Shish is content to accept of the Parliament for payment.

In witness whereof the parties above named have interchangeably set their hands the day and year above written.

JOHN HOLLAND THO: SMITH ROB THOMSON¹

Endorsement

We have overlooked this covenant and amended what was thought fit and the builders having seen the dimensions and scantlings etc herein contained; we conceive for the better expediting of the work you may proceed to agreement with them, who before they receive the papers are willing to conform to all such other particulars and articles for both sorts of ships as shall be proportionable to the dimensions, which we leave to your Worships' consideration and remain yours to be commanded:

JOHN TAYLOR
CHRISTOPHER PETT
JONAS SHISH

Second Endorsement

Mr Shish his Contract²

¹ Not signed by Jonas Shish.

² The back of the document also bears the two sketches reproduced in Pl. I. It seems probable that these were drawn by Shish himself.

RECORDS

THE ARMED SHIPS OF FOLKESTONE

By *M. A. N. Marshall*

During one of the greatest times in our naval history, when England was at war with France, Spain, America, Holland, at the end of the eighteenth and the beginning of the nineteenth century, the ships of Kent played a very important part in bringing victory to us. In the shipyards of Folkestone ships were built speedily to the demand for action; the best of Kent's men captained the ships, and with staunch crews many actions were fought at sea, and valuable prizes were brought into Folkestone to enrich the town and to make it prosperous. Folkestone merchants and mariners armed their ships which were used either as armed merchant ships, or as privateers (privately owned ships of war used solely for action against the enemy). Both merchant ships and privateers had power to take enemy ships and their cargoes and crews, after having been granted Letters of Marque for this purpose. The term 'privateer' was often used as a general name for all private armed ships. These ships of Folkestone ranged from about 40 tons to 400 tons and often carried large crews which included a surgeon, and a carpenter to repair the ship's wood-work after a fight at sea. Some of the small ships were of great use in the defence of trade. One writer at this time says, 'the owners of Dover, Deal, and Folkestone privateers will soon make their fortunes by the Dutch war; they will fit out from their ports half-deck boats with four guns and about 20 men, in which they will cruise across the Channel between Dover and Calais so that no Dutch ships can well pass them'. Also, we hear that a 'Folkestone privateer has taken a West Indianman said to be the richest West Indianman taken since the commencement of hostilities'.

The following ships are some of the armed ships of Folkestone during the end of the eighteenth century, from 1778. It will be seen that the chief shipowners of Folkestone at this time were Phineas Jacob, shipwright, William Major, or May, and Jenkins Cullen, merchants. The owners mentioned are of Folkestone except where stated otherwise.

Achilles. 300 tons, 20 carriage guns, 80 crew. Captain William Yawkins.

Owners. William Major, Jenkins Cullen.

William Yawkins was the intrepid smuggler of Deal whom Nelson chose to act as pilot to his Channel squadron. He was also captain of another *Achilles*.

Achilles. 110 tons, 12 (3 lb.) carriage guns. Captain William Yawkins.

Owners. Messrs William Major and Vanderwort.

The ship at this time was voyaging to Lisbon and back for wine.

Achilles. 130 tons, 12 (3 lb.) carriage guns. Captain Robert May.

Owners. James Cullen, Jenkins Cullen, Richard Cullen.

Active. 100 tons, 12 (4 lb.) carriage guns, 12 swivels. Loop stern, no head, one mast.

Owners. Captain Jenkins Cullen, Richard Cullen, Richard Major, John Yawkins was mate.

The ship was going in ballast to Lisbon for wine. A newspaper record of 3 November 1778 states that 'Captain Jenkins Cullen sighted a large shallop from Dieppe to S. Domingo, with beef, pork, peas, wines, glass, etc.' Also, in 1779, 'The Active privateer of Folkestone took a French privateer'.

Active. 70 tons.

Owners. George Boxer, John Boxer, Richard Hawkes.

Ant.

A newspaper record of 1793 states: 'The Ant cutter of Folkestone, Captain John Cornish, captured by a French brig of 14 guns and 140 men, from Dunkirk, about 10 leagues southward off Lowes*oft, escaped. After taking possession and putting on board four of their crew, and leaving

two of the Englishmen on board the *Ant*, they proceeded on their carriage to the North Seas. But when the *Ant* arrived off Dunkirk, yesterday morning, it began to blow, when it was found necessary to shift the jibb, and two of the Frenchmen went below to get up another, upon which one of the Englishmen instantly lowered the jibb upon them, and shut down the hatch, to prevent their coming up; the other Englishman immediately laid hold of a pump break, and with it knocked down one of the other Frenchmen, and broke his arm, and the fourth jumped overboard and was drowned. The two Englishmen, being now in full possession of their vessel again, proceeded home, and arrived safe here, and put the Frenchmen on shore. They were committed to prison this morning.' A further record in November 1793 states: 'The Society for the Encouragement of Re-Captures has given 30 guineas to the two Folkstone men who re-took the *Ant* cutter.'

Betsey. 63 tons, 6 carriage guns. Captain John Eastwick.

Owners. William Titchener, mariner, Richard Hodgeman, carpenter.

Buck. 344 tons, 24 (9 lb.) carriage guns. Captain George Fagg.

Owners. William Major, Phineas Jacob.

A record of 1794 relating to Captain Fagg: 'Captain Fagg of Folkestone, in a cutter sailed from Ostend about a month hence, supposed to be bound for the Yorkshire coast; no intelligence has, however, been received of her, and there is reason to fear that the vessel with the whole crew are lost. There are several Folkestone men on board who have left behind them large families to lament their loss.'

British Hero. 210 tons, 20 carriage guns. Captain Thomas Willard of Dover.

Owners. Richard Dangerfield, Henry Ladd, of Dover.

Charlotte. 130 tons, 10 carriage guns. Captain William Herral. d.

Owners. Thomas Hayman, Daniel Fox.

Crown. 220 tons, 26 carriage guns. Captain James Thompson.

Owners. Thomas Matthews, William Matthews, merchants.

The ship traded with Lisbon.

Cruizer. 198 tons.

Owners. John Major, commander of the privateer.

A newspaper record of February 1779 states: 'The *Cruizer* of Folkestone took the *Princess Robeck*, a large French privateer of Dunkirk, John Major, captain of the *Cruizer*.'

Deception. 160 tons. Captain Stephen Marsh.

Owners. Vincent Pain, Phineas Jacob, William May, and company, merchants.

The ship was employed in trade with Oporto.

Deception. 130 tons, 10 (3 lb.) carriage guns, 30 crew. Captain Stephen Marsh.

Eclipse. 180 tons. Captain Richard Dangerfield.

Owners. William Major, Phineas Jacob.

A newspaper record of January 1779 states: 'On Friday night was sent into this port (Dover) by the *Eclipse*, Letter of Marque, Richard Dangerfield, commander, belonging to Folkestone, and the *Liberty* belonging to Hastings, Mark Bailey, commander, a large Brig, named the *Betsey*, lately commanded by Henry Shrenack; her cargo consisting of sailcloth, and linen, is valued at 10,000 L. The said Brig was retaken by the above Letter of Marque on her voyage from Peterburgh to London.' Also: 'The *Eclipse* privateer of Folkestone, Captain Baker, arrived at Folkestone. On a cruise near the Isle of Wight he fell in with a large French ship and took her after 2½ hours engagement, the *Count Delon*, of Dunkirk, 16 carriage guns, 22 crew. The *Eclipse* had 8 carriage guns.' This was the *Eclipse* of 105 tons with Captain Baker, commander.

New Eclipse. 300 tons, 22 carriage guns, 145 crew.

Owners. Messrs. Cock and Taylor, merchants.

The ship traded with Madeira.

Eleanor Schooner. 22 carriage guns, 80 crew.

A newspaper record of September 1777 states: 'The Eleanor Schooner was launched from the yard of Phineas Jacob, of Folkestone, a Letter of Marque. The completest vessel ever launched from our beach.'

Fame. 240 tons, 20 carriage guns, 70 crew. Captain Robert Tapley.

Owners. Thomas Goulder, Edward Tapley, James Vickers, Robert Tapley.

The ship traded with Madeira for wine.

A newspaper record of 1778 states: 'Yesterday arrived from a cruise the Fame privateer, of Folkestone, Captain Tapley, and has brought in a French ship of about 400 tons from S. Domingo, laden with indigo, estimated at 60,000 L. value. The Fame is a very fine cutter. She mounts 20 carriage guns, six pounders, and as many swivels. She is well manned.' Another record of 1779 states: 'The Fame, 20 guns, Captain Tapley, (reckoned one of the finest cutters in England) was swept by storm at Folkestone to the coast of Boulogne.' The ship sank, and the crew swam ashore and were made prisoners.

Flora. 130 tons, clinker built, copper nailed. Captain John Pyscings, owner and commander.

Flying Fish. 200 tons.

Owner. Thomas Gittens.

Flying Fish. 240 tons, 20 carriage guns.

Owners. Thomas Gittens, the Elder, Robert Milton, and company.

Flying Fish. 136 tons, 10 carriage guns.

Owners. William Boxer, Richard Godden.

A newspaper record of 1781 states: 'Captain Gittens of the Flying Fish, privateer writes to his owners at Folkestone, from Lisbon, dated April 28th that he is put in there, after cruising a considerable time, and taken nothing. That he found there, the Tartar, Captain Gibson, who arrived in five days from Gibraltar, all well. The above Tartar has been reported to be taken and carried into St Marloes.' A record of 1781 states: 'On the 3rd inst. arrived in the Downs, the Flying Fish, Letter of Marque, of Folkestone. She came express from Gibraltar and in her passage into that garrison was chased by twenty row boats, and six Xebecks, all of which she escaped by being a remarkable fine sailor. In the Bay she fell in with, and took, a large French ship from Marseilles to Martinique, laden with silks, etc. a very valuable cargo, supposed to be worth 30,000 L. She afterwards fell in with four other large French ships, but having manned the prize, and being fearful of being delayed with the dispatches, did not choose to attack them. The prisoners of the above prize were landed at Deal.' A later record states: 'The Flying Fish cutter which lately ran on shore near Gravelines is got off, and carried into Calais without having received any damage.' Further: 'the capture of the Flying Fish has occasioned great rejoicings the other side of the water, she having a long time been a terror to their privateers in the Channel'. The officers and crew of the privateer were allowed to return to England and were treated very well by the French and they arrived in Dover in a cartel ship from Calais.

Fox. 140 tons.

Owner. Captain George Fagg.

Friends. 180 tons.

Owners. Thomas Cullen, Thomas Lawrence, Henry Butcher, merchants.

Hector. 300 tons, 20 carriage guns.

Owners. John Kneen, William Major.

Horton. 300 tons, 20 (9 lb.) carriage guns. Captain Nicholas Jespersen.

Kent. 210 tons. Captain Edward Firminger.

Owners. William Major, Thomas Hayman.

The ship was in trade with Lisbon for wine.

Kent's Success. 210 tons, Captain Edward Firminger.

Owners. William Major, John Pepper, Captain Edward Firminger.

The ship was in trade with North Bergen with provisions.

Kite. 160 tons. Captain William Ball.

Lark. 184 tons, 16 carriage guns. Captain William Marsh.

Owners. William Marsh.

The ship was in trade with the West Indies with provisions. A newspaper record of April 1779 states: 'the following account of one of our cruizers, though unsuccessful, will oblige many of your readers. Captain William Marsh, of the Lark cutter, of Folkestone, mounting 16 guns and 12 swivels, on the 15th March last, fell in with, off the coast of Flanders, two French doggers, of 14 guns, and 74 men each; the engagement began about half past four in the morning, unfortunately, the Captain was killed the first broadside, by a musquet ball, the officer that succeeded him, and the surviving crew, behaved so gallantly they obliged the doggers to strike, but before they could take possession of them, they saw two sail coming down, which proved to be two French cutters belonging to Dunkirk, who, with the Doggers, renewed the action, when our brave Englishmen, after firing away all their ammunition, were obliged to submit to superior force, with the loss of 6 killed and 12 wounded, 2 mortally. The French had 36 men killed 17 wounded, and after an obstinate and bloody engagement of 7 hours, they were carried into Dunkirk with 6 feet of water in their hold. The above privateer was a fine vessel, and was launched from Mr. Phineas Jacob's yard at this place only a fortnight before.'

Liberty. 160 tons, Captain David Browning.

Owner. James Clark.

The ship traded with Norway with provisions.

Lively. 105 tons. Captain John Davidson, sole owner and commander.

The ship traded with the West Indies with provisions.

Lady's Monkey. 48 tons, 4 carriage guns, 3 masts. Captain Thomas Tapley.

Principal Owner. John Haddon.

Lurcher. 135 tons. Captain Thomas Golder owner and commander.

A newspaper record of December 1782 states: 'The Lurcher, a fine cutter belonging to Folkestone, yesterday morning standing in too near in a thick fog unfortunately struck on the rocks, and sank near the entrance to the harbour; but as the weather is now moderate, there is great hopes of saving her.'

New Shoreham. 205 tons, Captain Stephen Golder.

Owners. Richard Cullen, Mark Sandford.

Nonsuch. 192 tons, Captain George Swaffeny.

Nonsuch. 180 tons. Captain Thomas Swaffeny.

A newspaper record of August 1778 states: 'the Nonsuch, Fame, and Achilles privateers of Folkestone have taken several Spanish, and French prizes.'

Pegasus. 150 tons. Captain Peter Baxter.

Owners. Daniel Fox, Captain Peter Baxter.

The ship traded in linens and woollens with the Mediterranean.

Phoenix. 280 tons, 20 (9 lb.) carriage guns.

Owners. Richard Dangerfield, Phineas Jacob, Edward Bate.

Phoenix. 200 tons, 16 carriage guns. Captain George Boxer.

Owners. Jenkins Cullen, Mark Sandford, merchants.

Phoenix. 170 tons, Captain George Boxer.

The Queen. 130 tons. Captain Golder.

A newspaper record of 1793 states: 'The Queen cutter of Folkestone, sent into Guernsey, the La Amie de Plainter, of Bayonne, brig privateer, of 14 pounders, and 90 men, taken by Captain Goulder, of the Queen, and Captain Steward of the Surprize, about 20 leagues from Bordeaux, after an engagement of one hour and five minutes. Captain Steward had 10 men wounded.' A newspaper of 1794 advertises the sale of *The Queen*, 'clinker built, a prime sailor, in good repair, and fit for sea immediately either for H.M. service or as a privateer'.

Ranger. 200 tons 18 carriage guns. Captain George Alesbree.

Owners. William Major, Phineas Jacob.

Rambler. 170 tons Captain William Cullen.

Owners. Thomas Winter, William May, and company.

Resolution. 300 tons, 12 carriage guns. Captain William Stephenson.

Owners. Isaac Gulliver, of Christchurch, Southampton.

Resolution. 280 tons. Captain James Cullen.

Owners. Thomas Sharpe, Thomas Potts, William Godden and Captain Cullen.

Resolution. 240 tons. Captain John Piscings.

Owners. Richard Dangerfield, John Piscings.

Resolution. 190 tons, 16 carriage guns. Captain John Sladen.

Owners. Joseph Sladen, Robert Harvey, Captain John Sladen.

Rose. 28 guns, 100 crew, a frigate.

Owners. Messrs. Hall and Co.

A newspaper record of June 1783 states that the Rose frigate was to be launched, 'a very beautifully mounted ship with carved work, the largest ship in the country, with all her mast in and rigged and sails set ready to sail immediately. She will be launched with 100 men on board which has never been attempted before.' After the launching the record was: 'On Wednesday last was launched from the yard of Messrs. Hall and Co. at Sandgate, near Folkestone, a frigate, of 32 guns, called the Rose, built upon a new construction the weather proving fine, and owing to the very great and friendly exertion of their brother shipwrights and others who kindly gave their assistance at the launching (which Messrs Hall and Co. take this opportunity of most gratefully acknowledging) it proved a very fine launch, as not only from the situation of the place where she was built, but also the critical time of the flowing of the tide, made it require a great exertion in a very short space of time'.

Sandgate. 20 tons, 2 carriage guns. Captain Edward Kenny.

Owners. Stephen Ratcliffe.

Sea Lyon. 250 tons, 20 carriage guns. Captain John Blyth.

Owner. Charles Maitland, Thomas Valder, merchants.

Speedwell. 180 tons. Captain John Hart.

A newspaper record of December 1778 states: 'On Tuesday night was sent into this port, by the Speedwell, Letter of Marque, belonging to Folkestone, John Hart, commander, a large French sloop, burthen about 100 tons, named Le Senior Francois Jacque, Geliffair, master, laden with oil, fruit and different sorts of merchandize, from Dieppe bound to Fescamp. Soon after the Speedwell had shifted her prisoners a sail was discovered which she immediately pursued, and yesterday a large privateer belonging to Harve le Grace was sent into the Downs by the above Speedwell and His Majesty's cutter, Ferret. A severe engagement ensued between the above vessels in which the French privateer had seven men killed and thirteen wounded without any loss on the side of the English. The above privateer is named the Phoenix, Favre, master, mounts 12 nine-pounders, 18 swivels, and 40 men, had been at sea only four days, in which time she had taken five prizes, which being in company with her were all re-taken by the above cutters Ferret and Speedwell.' A further record of 1782 states: 'On Friday night last arrived in Folkestone

Road, the Speedwell, Letter of Marque, Captain John Hart, of that place, with a French cutter privateer of Dunkirk, named *Le Petit Maraudeur*, having twelve carriage guns, four pounders, and eighty men, which he took after a short resistance, off Newhaven, on Thursday morning. The French privateer who first discovered Captain Hart was chasing a transport from New York of 600 tons, which he would shortly have taken had not the Speedwell prevented it. The above French captain has, during the war, taken eighty sail of prizes, and carried them safe into France.' On 23 March of the same year the privateer, *Le Petit Maraudeur*, was on sale at the Sign of the Three Mackerel at Folkestone, referred to as 'lately taken and condemned as a prize to the Speedwell, Captain John Hart'.

Sprightly. 116 tons, 32 guns. Captain Edward Firminger.

Owners. Phineas Jacob, Captain Firminger.

Success. 220 tons, 16 carriage guns.

Owners. William Major, John Pepper, Captain Edward Firminger.

Surprise. 250 tons, 20 (6 lb.) carriage guns, lute stern no head, one mast, 70 crew. Captain Thomas Huntly.

Owners. Phineas Jacob, of Folkestone, and William Wenham, of Hastings.

Surprise. 200 tons, Captain Daniel Cock.

Owners. William Major, Phineas Jacob, Thomas Hayman, John Pepper, merchants.

Surprise. 70 tons, 8 carriage guns, 8 swivels. Captain Thomas Fagg.

Owners. Phineas Jacob, Captain Thomas Fagg, Sarah Jacob.

The ship traded with Madeira. In January 1779 this cutter privateer was on sale at The Sarazen's Head.

Swiftsure. 200 tons, 16 (6 lb.) carriage guns, 10 swivels, 50 crew, square stern, one mast.

Owners. William Major, Phineas Jacob, John Pepper, merchants, Daniel Cock, mariner.

On 23 January 1779, a newspaper record states: 'The *Swiftsure* privateer of Folkestone, Captain Daniel Cock, has taken *Le Singulier*, Jacques Darramonde, master, from Martinico to Bordeaux, and brought her into this port. She has a very valuable cargo on board.' On 1 March 1780 there is the record that: 'The *Swiftsure* cutter of Folkestone, Captain Cock, has taken and carried into Lisbon the Bartholomew Rudulf, from Bilboa to Cadiz with bar iron, wheat, wine, etc.'

Tartar. 180 tons, 16 carriage guns (4 lb.), 14 swivels, square stern, no head, two masts, 50 crew. Captain John Gibson.

Owners. William Major, and company, merchants, and Captain John Gibson.

A newspaper record of 9 March 1779, states that: 'The *Tartar* privateer, of Folkestone, John Gibson, commander, has brought into this port, the *Phoenix*, an American brig, from Salem, bound to Bordeaux with 100 hogshead of tobacco, besides some indigo, which as times are at present, will turn out a valuable prize. The *Tartar* sailed from hence a few days since, and has during that time driven eleven French coasters on shore'. Also a record of 1779 states that: 'The *Tartar* privateer of Folkestone has just brought in a very large ship, a Letter of Marque, bound from Bordeaux to Carolina with gun powder, etc. She also took a Brig from the same place to Rochester, with castile soap, etc., and after taking out the best of her cargo, burnt her'. A further record states: 'The *Tartar* of Folkestone has taken *Le Quartier Maria*, of 600 tons, from Guadalupe to Nantz, with sugar, and 225 casks of indigo, and carried her to Falmouth. She is sailing with 49 others'. In July 1780 we hear that: The *Tartar* of Folkestone and the *Porcupine* of Liverpool took the ship, *Elizabeth*, from Bordeaux to Bilboa with a cargo of sugar, chocolate, indigo, wine, and sent her to Falmouth.' Captain John Gibson was a well-known, fearless privateerman on this coast during these wars.

Thunderer. 250 tons. Captain Henry Cock.

Owners. Henry Cock, of Folkestone, and Nicholas Plowright, of Walsingham, Norfolk.

The ship traded with the Mediterranean.

Two Brothers. 200 tons. Captain Andrew Hague.

Two Sisters. 245 tons. Captain Isaac Hawkes.

Owners. William Taylor, Captain Hawkes.

The ship traded with North Bergen with provisions.

Thetis. 84 tons. Captain Richard Hart.

Owners. Thomas Minter, Thomas Huson.

A newspaper record of 1796 states: 'The Verie Brig of Sunderland, coal laden, which was taken some days ago near Hythe, is retaken by the Thetis lugger privateer of Folkestone, and sent in here (Dover).'

Unity. 190 tons. Captain James Boxer.

Unicorn. 185 tons, 16 (4 lb.) carriage guns, 48 crew. Captain William Moffatt.

Owners. Phineas Jacob, Thomas Parker, of Wapping.

The ship traded in the Mediterranean with provisions.

Unicorn. 200 tons, 16 carriage guns, 10 swivels, 60 crew. Captain Robert Tapley.

Owners. William Major, Robert Tapley.

The ship traded with Lisbon for wine.

Union. 210 tons, 16 (6 lb.) carriage guns. Captain Jacob Boxer.

Owners. Richard Cullen, William Major.

The ship traded with Lisbon for wine.

Viper. 460 tons, 24 (9 lb.) carriage guns, no swivels, 3 masts, square stern. Captain George Browning.

Owners. David Browning, merchant, and John Holmam.

The ship traded with Portugal and New York with provisions.

Viper. 365 tons. Captain David Browning.

Owners. James Clark, David Major.

Wasp. 260 tons. Captain John Hall.

Owners. Charles Maitland, Thomas Valder.

NOTES

THE STRAIGHT, AND OTHER, CHINESE YULOHS

(See *M.M.* Vol. 40, p. 321.)

Some years ago a scale model of a Hong Kong fishing sampan was presented by the writer to the National Maritime Museum, Greenwich, together with a brief description of its particular characteristics. This model was made by a sampan builder using the same techniques and materials as he used in building full-scale sampans. The straight yuloh characteristic of Hong Kong craft was built up like the full-size yuloh and the joint secured by rattan lashings.

At the same time the writer presented, amongst others, a scale model of a Hong Kong (Aberdeen) trawling junk, built under his direction by an Aberdeen junk builder. This model, owing to the Munich Crisis of 1938, had to be completed more rapidly than planned. The hull, rigging, and fittings, including trawl and trawling gear are in every respect similar to the full-scale junk of which the model is a replica in miniature. The rattan sails unfortunately could not be woven in the time available. Therefore cloth patch sails simulating rattan sails were fitted. In shape, fitting, rigging, the sails are entirely correct. Only the texture and colour of their cloth are incorrect. This model naturally included yulohs to scale.

While field research upon Chinese junks is likely to be impractical for some years there is in this country, and in France and Holland, sufficient material in the form of models and publications to enable the various basic types of Chinese yuloh and indeed of other accessories and features to be classified, and their distribution and that of their variants to be plotted.

The writer would suggest four broad classifications:

(1) *River Craft*; subdivided into those of the Yellow River, Yangtze Kiang, and Pearl River systems.

(2) *Estuarine and Deep Sea Craft north of the Yangtze Kiang to Antung.*

(3) *Estuarine and Deep Sea Craft south of the Yangtze to Hainan.*

(4) *Estuarine and Deep Sea Chinese Craft between Hainan and Penang.*

This classification it is suggested is basic to the study of any junk and sampan characteristics and accessories, with the added proviso that these four 'horizontal' divisions must be divided 'vertically' into 'Trading Junks and Sampans', and 'Fishing Craft'. The former are susceptible to subdivision into three broad functional classes, namely, Cargo Carriers, Passenger Carriers and Port Lighters. Fishing Craft are also conveniently subdivided into three functional classes, namely, Trawlers, Drifters and Line Fishers. Fish Carriers—junks designed for carrying fish from the fishing grounds to the markets—would either form a fourth subdivision or be included in the Trading Junk category under the 'Cargo Carrier' subdivision.

Reverting to the study of yulohs, various articles in this *Journal* in the years 1937-40 include descriptions and illustrations to scale of some varieties. In the National Maritime Museum, Greenwich, scale models of Hong Kong, Pechili and Antung junks presented by the writer, and a scale model of a Foochow Trader made under the writer's supervision—like the others—and loaned by Captain Oliver Bellasis, R.N., have the appropriate yulohs made to scale. There is also a scale model (so far not exhibited) of an Antung junk presented by the writer to the Science Museum, South Kensington. All these models were made from junks in harbour at the time and their accuracy approved by their respective masters who also assisted in their construction.

For the student initiated by practical experience into the almost infinite variety of detail found in the numerous types of estuarine, coastal, and deep-sea Chinese junks and sampans still surviving, field research based on museum models is a quite practicable proposition. But the writer must warn the student not so qualified that there are dangers in making deductions from models unless their authenticity is absolute. Thus, for instance, the massive model exhibited in the Maze collection at the Science Museum, South Kensington, as being of a Pechili Trader represents notwithstanding what its label asserts, no known type—past or present—of Chinese, or other, junk. Any deductions

based on study of it will be not only valueless, but also misleading. Even models originally absolutely true can mislead. Accessories of one model can become mixed up with those of another and re-rigging can be done incorrectly. This has happened to models which, when presented by the writer, were in every respect correct.

It may be possible for some students to spot such errors, when in the course of time they occur, by careful comparison with printed sources or with photographs or drawings or paintings by expert marine artists, but the task of having them remedied may be more difficult. Time seems sometimes to sanctify error.

In conclusion the writer would emphasize that G. R. G. Worcester's works on Yangtze Kiang junks are indispensable and infallible source books on their subject.

D. W. WATERS

A NOTE ON NORSE SEAMANSHIP: *SIGLA TIL BROTS*

The ocean-going sailing vessel of the early Viking era was the outcome of a centuries-long process of evolution. A distinctive principle of this ship-design was, that the lower strakes of a vessel's planking were lashed to the ribs by bast cords or withies. Such a method of fastening allowed of a very much thinner planking than would have been possible with the strakes simply nailed to the frames. To this, in fact, the extraordinary buoyancy and elasticity of the Viking craft was in large measure due. The whole structure could give without breaking.

It sometimes happened that when a ship was set on a lee shore, her crew would steer straight for the land in the hope of saving life, even if ship and cargo had to be sacrificed. On many occasions it is recorded that though the craft, and sometimes the whole of her lading, were lost, her people came 'safe and sound' to land. The hazardous operation of running in under sail through a heavy sea (*sigla til brots*) seems to have been accomplished with great skill. In the danger area of a surf the slightest error of judgment would probably cause the vessel to broach to, or slew round broadside on in the trough of a sea. The light and flexible structure of these Norse sailing craft—resulting from the traditional method of construction already remarked upon—helped to make this manoeuvre possible. There is an excellent example of running a vessel ashore in the *Orkneyinga saga*. 'Wednesday was very stormy, but during Thursday night they sighted land. It was then very dark. They could see breakers all around them. Up to this time they had held together. Now there was no choice but to run the two ships ashore; and so they did. There was a rocky beach in front of them, and only a narrow foreshore, and cliffs beyond. Then all the men were saved, but they lost much of their belongings; some of them were thrown up during the night.'¹ There is a similar case in the *Egils saga*. 'Then they sailed southwards past Scotland, and had great storms and cross winds. Weathering the Scotch coast they held on southwards along England; but on the evening of a day, as darkness came on, it blew a gale. Before they were aware, breakers were both seaward and ahead. There was nothing for it, but to make for land, and this they did. Under sail they ran ashore, and came to land at Humbermouth. All the men were saved, and most of the cargo, but as for the ship, that was broken to pieces.'²

This operation, *sigla til brots*, can be traced at least as far back as the settlement of Iceland. It is stated in the *Landnámabók* that 'Kraku-Hreidar . . . came to the Skagafjörð and ran his craft ashore on the Borgársand.'³ It is recorded or implied in many a passage in the Icelandic annals and sagas. There were innumerable cases of vessels lost, but the crews saved, on the coasts of Iceland and Greenland.

There is a widely held but wholly erroneous impression that the ocean voyages of the Norsemen were made in longships of the familiar Gokstad type. The truth is, that the vessels which voyaged to North America, Greenland, Iceland, and even the Faeroe Islands were *hafskip*, or ocean-going merchantmen. Now the *hafskip* was essentially a sailing ship. The cargo, or *búlki*, was stowed amidships: the oars, which were few in number, were rigged fore and aft; they were commonly

1 *Orkneyinga saga*, trans. A. B. Taylor (1935), p. 277.

2 *The Story of Egil Skallagrimsson*, trans. W. C. Green (1893), p. 125.

3 *Landnámabók*, ed. F. Jónsson (1900), p. 187.

used for getting the ship in and out of port, and for assisting her to go about; they would be useless on a lee shore, or in bad weather. Nor, with the simple rigging and sail-plan of a *hafskip*—one mast and one square-sail—was it possible to resort to elaborate manoeuvres under sail like those described in Falconer's *Universal Marine Dictionary*, or in Chapter xv of Marryat's *Peter Simple*. Hence the necessity for this desperate remedy, *sigla til brots*.

G. U. MARCUS

THE WHALING TRADE OF IPSWICH

With reference to the article under this heading in the *Mariner's Mirror* of November 1954, the encouraging words of Defoe and other writers, on the advantages of Ipswich as a whaling port, nearly bore fruit before Cornwell, Mangles and Co. embarked on their venture in 1786. In an advertisement dated 23 December 1784, published in the *Ipswich Journal* (24. xii. 1784), Captain Ralph Hare announced that he had been approached about fitting out a Greenland ship, to sail from Ipswich, and would-be subscribers were asked to attend a meeting on the 29th of that month. It was estimated that the ship and her outfit would cost £3200 and shares were to be offered in 8th, 16th and 32nd parts. Ralph Hare, over a period of some thirty years, had steadily built up his business as a hoy-owner and, at that time, owned sloops engaged in regular trade to London, Hull and Gainsborough, besides wharves and warehouses in Ipswich. Whether, for some reason, his fortunes were then manifestly waning and he hoped to restore them by a speculation in the then-flourishing whaling trade, we cannot tell, but nothing more was heard of the venture and, in the following November, Hare was declared a bankrupt.

It seems highly probable that, beside the *Orwell* and the *Ipswich*, Cornwell, Mangles and Co. also owned the *Christopher*. When the establishment of their whaling business at Nova Scotia Yard was announced in the press, a third ship was said to be 'not nam'd, but provided' (*Ipswich Journal*, 9. xii. 1786). Apart from the doubt concerning the port from which the *Christopher* sailed for the 1788 season, she was obviously an Ipswich-based vessel, returning there with her catch, and operating also from the River Orwell for the 1789 season. I have no evidence that she sailed at all in 1790. After Timothy Mangles had disposed of his Ipswich premises, the boats and fishing stores of the *Ipswich* and *Christopher* Greenland ships were advertised for sale at Nova Scotia (*Ipswich Journal*, 11. i. 1794).

On the other hand, the two ships which the second company operated seem to have been the *Simond* and the *Charlotte*. Both were always described as being of Ipswich but, in 1788, they were reported as being outward-bound off Orfordness, on 1 and 24 March respectively, and not as leaving the Orwell (*Ipswich Journal*, 8. iii. 1788, 29. iii. 1788), which indicates the Thames as their base. To the Thames they also returned, the *Charlotte* in August with one fish, picked up at sea without bone, and 108 seals (*Ipswich Journal*, 30. viii. 1788). The *Charlotte* did not go after whales in 1789. In the spring of that year she was wrecked off Elsinore, described as being 'late in the Greenland trade' but still belonging to Ipswich (*Ipswich Journal*, 9. v. 1789). Unlike Mr A. G. E. Jones, I have not studied the records of bounty payments but I would be interested to hear whether my contention can be substantiated in the light of the evidence contained in them. At least I have Wodderspoon (*Memorials of the Ancient Town of Ipswich*, 1850) to confirm my theory and, although the earlier historians are not always reliable, we must remember that the Ipswich whaling trade could well have been within living memory at the time he wrote.

I doubt whether Captain Harrison of the *Orwell* ever indulged in much 'local whaling during the winter'. It seems that the appearance of a whale off the East Anglian coast was as rare in the eighteenth century as it is to-day, and that the worthy captain went off in pursuit of the one in the Wallet almost as a sporting venture. Fishermen reported the presence of the creature, so Harrison, probably bored with office work and refitting his ship near the 'noisome Cookery, which attends the boiling', seized the opportunity to charter the most suitable vessel to hand—a wherry—and 'with proper implements' sailed in search of his prey. After he had nearly, if not in fact, fallen overboard with his hand harpoon, he returned to pick up a harpoon gun but all was in vain (*Ipswich Journal*, 16. ii. 1788, 23. ii. 1788).

H. W. MOFFAT

THE TIBERINE ISLAND

Readers interested in M. Rubin de Cervin's learned and graceful article 'The Roman Galley of the Tiberine Island' in *M.M.*, Vol. 40, No. 4, may care to know that the shaping of the Isola Tiberina to resemble a galley is not the only vestige to-day of the events of 291 B.C. The swimming ashore here of Aesculapius, god of healing, appears to have left its impress, for the small island in the river still carries a hospital. Perhaps the site was suitable on grounds of air and isolation.

I do not know whether the Church of San Bartolomeo was built on the site of the Temple, though one might expect it to be so. An unusual feature of this church is a well in the middle of the altar steps, which could have been that associated with the Temple of Aesculapius.

M. SCOTT

RALEIGH'S CLOAK—AN HISTORICAL REVISION

Thomas Fuller, in his *The History of the Worthies of England*, published in 1662, is the original authority for the story of Raleigh's cloak, which has popularly been connected with Greenwich.

'But his introduction into the court', Fuller tells us, 'bare an elder date, from this occasion. This captain Raleigh, coming out of Ireland to the English court in good habit (his clothes being then a considerable part of his estate) found the queen walking, till meeting with a plashy place, he seemed to scruple going thereon. Presently Raleigh cast and spread his new plush cloak on the ground, whereon the queen trod gently, rewarding him afterwards with many suits, for his so free and seasonable tender of so fair a footcloth. Thus an advantageous admission into the first notice of a prince is more than half a degree to preferment.'

Sir Walter Scott, in his novel named *Kenilworth*, published 1821, borrows Fuller's story and adds to it (Vol. II, page 48):

'The night had been rainy, and just where the young gentleman stood, a small quantity of mud interrupted the Queen's passage. As she hesitated to pass on, the gallant, throwing his cloak from his shoulders, laid it on the miry spot, so as to ensure her stepping over it dryshod. . . . The Queen . . . hastily, passed on, and embarked in her barge without saying a word.'

Sir Walter Scott envisages the incident at Greenwich, close to the Palace landing stage. Sir Geoffrey Callender kept it at Greenwich but moved the spot a little inland. Writing in the *Society's Annual Report for 1928*, he says:

'Little wonder if the Woolwich Road was churned in bad weather into a quagmire! For it was here, men aver, that Sir Walter Raleigh, home from Ireland with dispatches of encouraging import, met the Queen returning from Greenwich Park and flung his new mantle over a "quashy", place that Gloriana might reach her trim kept lawns dry shod. . . . The Queen's House was to be Raleigh's cloak in the shape and proportions of a Palace.' Which becomes in *The Queen's House, Greenwich*, first published by our Society in 1937 and now sold on the National Maritime Museum bookstall:

'The outlook was dark, gloomy, and desperate, and the Queen, returning from an airing in the Park, found the narrow road, like the political situation, foul as the "Slough of Despond"! . . . from the Gate House on the opposite side of the road stepped a royal messenger. He was nearly a head taller than the officer of the guard; he had a black beard, blue eyes and a most gallant bearing. . . . He had sought her in Whitehall, then taken boat to Greenwich, and learnt that she was in the Park. Now she stood before him, with a "plashy place" between. Without pausing a moment, he flung his cloak from his shoulders, laid it across the mire and filth, and knelt as the Queen walked over it.'

G. P. B. NAISH

DRAKE'S GAME OF BOWLS

(See *M.M.* Vol. 39, p. 144 and Vol. 40, p. 160.)

I see no reason to doubt the story that at the time that Drake received the news of the Armada's arrival in the Channel he was playing a game of bowls. While his reputed comment may well be apocryphal, I have again no doubt that whatever he said had the same significance, namely: 'There is plenty of time to win the game and beat the Spaniards too.'

If ever a man had a cool head in an emergency, that man was Drake. On 19 July (old standard) 1588 'from 3 p.m. to 9 p.m. the flood stream flowed into Plymouth Sound so it was not until night that Howard could warp his ships out against the south-westerly breeze' (Waters, D. W., 1940, 'The Elizabethan Navy and the Armada Campaign', *M.M.* Vol. 35, p. 118). I see no reason for supposing that Stow's informant of 1600—or earlier—was telling less than the truth when he informed him—at most a mere twelve years after the event—that 'Officers and others kept revels on the shore... at the instant of the enemy's approach', or that these revels included, as he avers, that not very riotous game called 'bowls'! Indeed I should have thought bowls a game well fitted to the age and sobriety of English sea captains of Drake's age and authority, and his brave reply to the stunning news that the English were cornered, like rats in a trap and with the odds all against them, typical of the man. Consider the situation—the enemy to windward and in superior force, the English, not only to leeward, but bound in by a flood stream in an anchorage that even Blake, a few generations later, was to call 'worse than a prison'; should the Spanish fighting ships press on they might well, with the wind and tide behind them, pin the English ships down to an action such as Drake and Hawkins had had to fight so disastrously at San Juan de Ulloa, a score of years before! It was enough to make the stoutest quail, particularly those who, like Drake, must have known, by an almost reflex awareness, the state of the tide; that for hours *nothing could be done to change the intolerable situation*. For tide as well as wind was against the English. As for the wind any man could feel that on his face and see for himself how the smoke from the town's hearths was borne inland. If the ships were wind-rode the sea captain who could not 'reken his tydes' as well as Chaucer's shipman of Dartmouth two centuries before had plenty of means of finding out the state of the tide, and for how long it would flow, and in which direction. There must have been many a master amongst that fleet who treasured a manuscript 'Tide Table and Almanac' like the one by G. Brouncon, written about 1545, and now preserved in a Cambridge Library, with the name 'Fr. Drak' written on the fly. Others would have had, surely, the latest printed sailing directions, the 1587 edition of Robert Norman's *The Safegarde of Saylers* (first published in 1584), and either one of the numerous *Almanacs and Prognostications* published annually, or a copy of the latest edition of Moore's *Fourtie Yeares Almanacke*, first published in 1567, with its 'Verie plaine and perfecte table, called by some mariners the Flye' (which was a circular tide table), or, failing these, a copy of William Bourne's *Almanacke and Prognostication for X Yeeres*, published in 1581 especially 'for the use of sea men'!

What speech more nerving for the imminent battle, and at the same time more thoroughly appropriate to the occasion and the situation could Drake have made than his most pithy, 'There is plenty of time to win the game and beat the Spaniards too'?

To his hearers it would have smacked neither of bombast nor, despite the 'revels', of recklessness. The first sentence would have voiced the sober truth—think of the inflections Drake could have used to speak those words, of the dreadful emphasis he could have laid upon the words 'There is plenty of time...', glancing as he uttered them at wind and tide. That, in fact, he spoke the first sentence briskly and confidently we can be fairly sure for the anecdote has come down to us in that spirit. Probably he spoke the second phrase in tones no less emphatic for being flavoured with a salty humour.

What Drake did, by his words, whatever they were, no less than by his action in proceeding with the game, was to steady the nerves of all those present and to keep their minds from fretting uselessly against the tardy turning of the tide. Drake was only expressing in his colourful way the lesson Canute had tried to teach his courtiers many centuries before—or must we assume that that too is an old wives' tale?

LORD COCHRANE ON ABUSES IN THE ADRIATIC

Some of the dates mentioned by Mr P. G. Mackesy under this heading would seem to be incorrect. I am out of reach of official records, but the following are taken from *Robert Wilson's Journal* (Navy Records Society, Vol. xci) who was serving in the *Unité*, frigate, during the relevant period.

Captain Patrick Campbell heard of the French occupation of Corfu only on 4 September 1807, from the Russian squadron which had just arrived off the Istrian coast with the intention of occupying Venice.

He did not leave the Gulf of Venice for the southern Adriatic until 16 October.

He did not go to Malta to refit in November 1807, as Mr Mackesy states, but remained in the Adriatic until 16 December, on which day he turned over the duties of Senior Officer to Cochrane and sailed for Malta.

On 26 December, he heard from a transport that the *Standard*, Captain Harvey, had parted company with the admiral on 14 December to join the squadron off Corfu, and Wilson records surprise that the *Unité* had not sighted her on passage.

On 21 December the *Unité* hove to off Syracuse while Captain Campbell went into harbour by boat to report himself to Collingwood. The *Unité* arrived off Valetta the next day and went into harbour to refit the day after, 23 December.

From this it is clear that Collingwood had ordered Harvey, of the *Standard*, to take over from Campbell before he had had any opportunity of speaking to the latter, who had not been in company for the last sixteen months; and that Cochrane only became Senior Officer for a few days by the accident of the *Standard* not arriving on the station before the *Unité* had to leave in order to reach Malta before Christmas for her overdue refit.

Campbell's contention that many of his prizes in the Gulf of Venice were unfit to make the passage to Malta may well have been justified. It appears from *Robert Wilson's Journal* that hardly a day passed without the *Unité* capturing one or more coasting 'trabacaloes', many of which were either broken up for firewood, or burnt or given back to their crews after removing their cargoes. Occasionally, if another of the squadron, or a considerable prize, was being sent to Malta, some of the trabacaloes were sent with her. But it is difficult to see how the blockade in the Gulf of Venice could be maintained if every little coaster captured had to be manned for the passage to Malta.

As for Campbell's removal from the Adriatic, that did not take place until March 1809, when he had been on that station for nearly three years. Captain Hoste of the *Amphion*, writing to his father from the Gulf of Trieste on 23 March 1809, wrote 'I am *pro tempore* (I believe only) senior officer in the Adriatic, Campbell having been ordered to join the Commander-in-Chief.' On 29 April he wrote: 'We have been reinforced from Malta by the *Spartan*, Captain Brenton, who is senior to me, but who is ordered up here on account of the increase of the enemy's force at Ancona'. The practice of selling prizes locally would seem to have been still the rule there. Writing on 4 June and telling his father of the French occupation of the whole of Dalmatia, Hoste wrote: 'The capture of Trieste has lost us at least £10,000. We took in there, a week before its fall, and when everything was going well, 19 prizes loaded with oil, which were of great value and were taken with the place.' I am out of reach of the text of the Admiralty records cited by Mr Mackesy, but Campbell's later career hardly supports the theory that he incurred any appreciable official displeasure by his conduct of affairs in the Adriatic. He had had nearly three years of the most lucrative cruising ground on the Mediterranean Station, and it seems more probable that Collingwood thought it time that somebody else had a turn there. Moreover, since the situation made it necessary for ships of the line to be sent there, a frigate captain could no longer be senior officer in any case. One can agree unreservedly however, with Mr Mackesy's remark that Cochrane's narrative is not a reliable authority, though in justice to that mercurial character it must be remembered that his 'Autobiography' was written many years afterwards, when the clarity of his recollection of details may well have been clouded by his grievances.

H. G. THURSFIELD

THE NYDAM CRAFT AND THE ANGLO-SAXON INVASIONS

In R. H. Hodgkin's well-known *History of the Anglo-Saxons* (Oxford, 1935) it is stated that when the Anglo-Saxons invaded Roman Britain they presumably made the passage of the North Sea in vessels somewhat similar to the Nydam craft. 'When propelled by its twenty-eight oars', observes the author, 'it must have been fast, fast enough to elude the clumsier Roman galleys'. There follows a detailed description of this craft, which, by Hodgkin's estimate, might have carried 'some forty persons all told'. It would seem that a few comments are called for here. The archaeology of Roman Britain furnishes some very suggestive evidence regarding the increased range of Anglo-Saxon activities about this time. Since the close of the third century A.D., as is well known, a chain of forts had been erected along the south and east coasts of Britain—a tract which was now ominously known as the 'Saxon Shore'—between the Solent and the Wash. In the second half of the fourth century it is evident that danger must have threatened higher up the east coast. What was happening now, apparently, was that the Saxons were making the land in the neighbourhood of Flamborough Head; and when Theodosius restored the defences of Britain after the disastrous raids of the decade 360–70 new signal stations had to be erected on the Yorkshire coast, well to the north of Flamborough Head, in order to give warning of any enemy's approach. It may well be doubted whether the Nydam craft could have made the passage of the North Sea to this part of the coast. A glance at the chart will give some idea as to what kind of sea may be expected there under certain conditions of wind and tide. The Nydam craft was not built to face steep, hollow seas. It was long in proportion to its beam and had little freeboard. It was a rowing-boat, pure and simple. There is no sign of a mast—nor is it at all likely that it could have carried one. The Nydam craft was not fitted with a true keel, but with a broad plank projecting only very slightly below the bottom of the vessel. On the whole it seems more probable that the Anglo-Saxons used a ship resembling the Kvalsund craft, in which something much nearer to a proper keel is incorporated, which has far more substantial scantlings, and a greater beam in proportion to its length. (It is also possible, as Professor Shetelig recently informed the present writer, that the Kvalsund craft was fitted with mast and sail.)

Hodgkin appears unaccountably to have overlooked some important items of evidence on the subject of Saxon shipping. What is perfectly clear from both classical and British sources is that towards the close of the Imperial period, the Saxon raiders came over in sailing craft. The poet Claudian, writing in the fourth century, implies in *De consulatu Stilichonis* that these Saxon vessels were dependent on the wind. In the following century Sidonius Apollinaris (*Letters*, VIII, vi, 15) tells of Saxon war-craft with 'sails' and 'firm-holding anchors'. Lastly, Gildas (*De excidio*, c. 23) says that some Saxon settlers sailed over, in the middle of the fifth century, with a favouring wind *secundis vellis*. It was, in fact, the very progress achieved during the period under survey in ship design by these barbarian foes that made the onslaught of the Saxons and Scots so truly formidable to the British provincials.

Sidonius Apollinaris, writing to a friend who was in command of the naval forces stationed on the coasts of Gaul, gives us some interesting information about the Saxons during the very early years when they were pouring into Britain. He speaks of his friend 'coasting the western shores on the look-out for curved ships; the ships of the Saxons, in whose every oarsman you think to detect an arch-pirate. Captains and crews alike, to a man they teach or learn the art of brigandage; therefore let me urgently caution you to be ever on the alert. For the Saxon is the most ferocious of all foes. He comes on you without warning; when you expect his attack he makes away. Resistance only moves him to contempt; a rash opponent is soon down. If he pursues he overtakes; if he flies himself, he is never caught. Shipwrecks to him are no terror, but only so much training. His is no mere acquaintance with the perils of the sea; he knows them as he knows himself. A storm puts his enemies off their guard, preventing his preparations from being seen; the chance of taking the foe by surprise makes him gladly face every hazard of rough waters and broken rocks' (*Letters*, ed. and trans. Dalton, VIII, vi, 13–15).

THE RIG OF MEDIEVAL WARSHIPS

The controversy between Mr Dolley and Mr Barron has become too complicated for a layman to follow, but with regard to the question whether certain drawings show yards slung from their middle point the merest ignoramus can form an opinion, provided he has normal eyesight and a pair of dividers. Mr Barron's carefully prepared drawings seem to me to weaken his case, if anything. In February last (*M.M.* p. 77) after measuring the small reproduction I estimated the after part of the yard as being from 53 to 56% of the whole; now I make it about 56 or 58%. No doubt Mr Barron is justified in claiming that this does not *prove* that the halliard was attached nearer the fore-end of the yard than the after; but he can hardly expect us to take it as proving that it was central.

R. C. ANDERSON

MEMOIRES D'UN PROTESTANT

The foreword of this article (*M.M.* May 1954, pp. 145-51) is of unusual interest as it mentions 'the original documents', presumably the corresponding MSS., the existence of which is unknown to such prominent members of the French Society for the History of Protestantism as I may have contacted. The whereabouts of said MSS. would certainly mean valuable information to many students here.

The book has long been a classic of the history of the French oared navy. Its existence had completely fallen into oblivion when, c. 1860, a copy of the edition (in French, but printed in Rotterdam) of 1757, the earliest known here, was discovered in a private library in Lyons. The Society for Sunday Schools undertook to have it reprinted. Inquiries in the Netherlands brought to light later editions, giving full names of persons, while the 1757 one had them mentioned through mere initials, and also the name of the author. The new edition was printed in 1855 and copies, if a little scarce to-day, are well-known enough in Huguenot as well as nautical research circles. It gives the name of the author as '*Jean MARTEILHE, of Bergerac*'. Bergerac, by the way is the name of the city where the boy was born (p. 2, 1865 ed.), and was no part of the author's actual or colloquial name. Jean Marteilhe's text was elaborated by the Rev. Daniel de Superville, one of the clergymen who took care of him when he was freed and allowed to leave France.

Marteilhe was a convict in the galleys from 1700 to 1713. He belonged to the 'forçat' category of rowers. The latter included three categories: *forçats* (convicts) serving in pursuance of a judicial sentence, *esclaves* (slaves) captured from Barbary ships or places, or bought from same origin, and *bonnevoiglie*, i.e. freely enlisted men.

GUILLEUX LA ROËRIE

THE SHIPS OF THE THREE DUTCH WARS

In *The Mariner's Mirror* of October 1952 it was asked why British men-of-war had been for the last 250 years or so 'generally in the second class' as compared with their foreign contemporaries. No explanation was forthcoming, but some little argument followed as to whether this supposed inferiority had in fact existed, at least in comparatively modern times.

It is a well-known fact that in the eighteenth century British ships were usually smaller than French and Spanish ships of similar classes, but at the same time usually proved more than a match for their larger opponents. This was, indeed, a source of national pride, as was the belief that in the Armada campaign our ships, though admittedly handier, had been much smaller than those of the Spaniards. To borrow a quotation made and demolished by Sir John Laughton 60 years ago: 'The best of the Queen's ships placed alongside one of the first class of Spaniards would have been like a sloop-of-war by the side of a First Rate.' This belief has been thoroughly disproved, but still lingers on.

There was, however, one period in our naval history when our ships were certainly superior in size to those of the enemy; this was in the third quarter of the seventeenth century, the time of the three Dutch wars. Even at the end of this period, when the Dutch had done much to put matters

on a more equal footing, this was still the case, though Pepys did his best to prove the opposite.¹ In the first war the inferiority of the Dutch ships was so marked that one would have expected it to prove overwhelming. Napoleon is said to have been considered, or to have considered himself, equivalent to several thousand men—I forget the exact number. Marten Tromp must have been worth many thousand tons of shipping or hundreds of guns.

When the first war began the English fleet contained two 3-deckers and at least twenty ships of 40–50 guns; while the largest Dutch ships—and there were only four of them—were hardly bigger than the smallest of these. Tromp's *Brederode* measured roughly 120 ft. on the gun-deck and 30½ ft. in beam by English reckoning, just about the same size as the early Commonwealth 'frigates' of 40 guns or fewer. De Ruyter in the fight off Plymouth was in the 28-gun *Neptunus* measuring about 110 ft. by 28 ft. as against the 138 ft. by 36 ft. of Ayscue's *Rainbow*; while De With flew his flag at one time in the *Princesse Louise*, which was even smaller.

War-time building merely widened the gap. The Dutch did, indeed, build or requisition a number of ships larger than the *Brederode*, but the two largest of these, the *Eendracht* and *Hollandia*, were only about 135 ft. long (English) and the others about 125 ft.; while in England thirteen ships were launched, all larger than the biggest of the Dutch.

Ships of this class, large 2-deckers of some 50–60 guns, had proved able to do all that was required of them and it is a little surprising that the next ten years should have seen the launch of a number of still heavier English ships. By the time the second war began the English fleet had three genuine 3-deckers, the *Soveriegn* and *Prince* (both rebuilt) and the new *Royal Charles* (ex *Naseby*); it also had five near 3-deckers, if such a term may be allowed, all measuring something more than 150 ft. on the gun-deck and carrying some 70–80 guns. The Dutch, on the other hand, had built only one ship larger than Obdam's *Eendracht* and only two of her size. The single improvement was the *Spiegel*, which was about 140 ft. long and was, as Allin noted in 1664, 'not to be valued but with one of our meanest third [rate] frigates.'

Now at last sheer necessity forced Dutch shipbuilders to produce a class of 80-gun 2-deckers almost equal to their largest English contemporaries in size and, as it proved, fully able to hold their own against even larger opponents. Tromp's *Gouden Leeuw* was just larger than the *Royal Charles*; De Ruyter's *Zeven Provinciën* was about the size of the *Royal Katherine* or *Victory*, the latest of the English Second Rates. Six of these ships appeared during the second war, while in England the only new large ships were the *Victory* and the short-lived *Loyal London*.

By the end of the second war the Dutch had not only built more large ships than the English, but had accounted for five of their largest enemies, Ayscue's *Prince Royal* and the four big ships taken or destroyed in the Medway. This must have been the time when the two fleets were most nearly equal in material.

Certainly they were then far more nearly equal than they were in the third war, since no single Dutch ship of any importance was launched between 1667 and 1682. The Dutch had to fight the third war with the ships of the second; whereas in England five 3-deckers were built between the wars and another in time for the actions of 1673. The English losses of the second war had been more than replaced and there was now a substantial French squadron to be dealt with as well. It can only have been De Ruyter's leadership that enabled the Dutch to go through the third war with the honours, at the very least, equally divided.

The ability of these large Dutch 2-deckers to hold their own with the English 3-deckers was strikingly shown in the duel between Spragge and the younger Tromp at the Texel. It is true that both ships were disabled and both commanders forced to shift their flags, but there is no doubt that the *Prince* had the worst of it, although she was a larger ship than the *Gouden Leeuw* and had something like a 20 per cent superiority in weight of broadside. As had no doubt been the case before and as often happened in the next century, the inferior on paper proved the superior in practice.

R. C. ANDERSON

¹ See *M.M.*, 1946, p. 252.

THE MARINER'S COMPASS IN NORTHERN EUROPE

The object of the following observations is to draw attention to certain interesting items of evidence relating to the mariner's compass in the North which appear to have been generally overlooked by English writers. They serve to refute a suggestion which has sometimes been made, namely, that the mariner's compass was not in general use, in the later Middle Ages, on the Northern trade-routes.¹ Soon after the appearance of Chaucer's *Treatise on the Astrolabe* containing the well-known lines, 'Now is thyn orisonte departed in 24 parties by the azimuth, in significacion of 24 partiez of the world; al-be-it so that shipmen rikne thilke partiez in 32'. occurs the first mention in Northern Europe of compass-makers and the export of compasses. In the year 1394 reference is made to certain *kompassmakers* in the records of the German Hanse. In 1400 a dozen compasses are stated to have been despatched to Yarmouth from the Low Countries. In the fifteenth century compasses as well as other scientific instruments were manufactured at Nuremberg. In 1460 a Danzig craft, lying at Marstrand in the Baltic, was equipped with 'an cleidere, compasszen, segelsteyne et. mit der fracht'; in the Hamburg archives in 1461 mention is made of a payment made to Gerard of Essen 'pro duobus compassis' and, ten years later, 'pro compasse et nachtglase'; in 1475 a vessel of Amsterdam was provided with 'compassen unde glasen'; in 1478 a craft from Oslo was equipped with 'alte hans harniske. . . fiskereidzcap, lood oc loodlynor, kompassa oc allan sina reidzcap'. The oft-quoted observation made by Fra Mauro to the effect that neither chart nor compass was used in the navigation of the North Sea and the Baltic ('per questo mar non se naviga cum carta ni bossola, ma cum scandaio') is not to be taken too seriously. From the fifteenth-century *Das Seebuch* numerous compass courses may be cited for both the seas in question.² It is to be emphasized that the references in the Hanse records and elsewhere to the sailing-stone, needle and stone, etc., do not mean that the primitive needle-on-a-straw device was actually still in use in the fifteenth century. Lodestones are mentioned often enough in contemporary documents. The truth is that needles at this time were only weakly magnetized; they tended to lose their magnetism (e.g. during a thunderstorm), and it was accordingly the custom to carry the lodestone, not only in the mediæval period, but for centuries afterwards. The procedure has been succinctly described by Professor Morison: 'Whenever this needle showed any disinclination to "seek the north" it was remagnetized with a bit of lodestone that the captain guarded as his life.' (Cf. *Cock Lorrell's Boat*: 'one kept ye compas and watched ye our glasse. Some ye lodysshestone did seke some ye bote dyd swepe.') In the same way it was well understood that the lodestone might occasionally be used to falsify the compass needles.³

In Olaus Magnus's *Historia de gentibus septentrionalibus* it is stated that in the vicinity of Trondheim, Narvik, the Lofoten Islands and other regions of the *Nordland* the mariner's compass was carried in the local fishing craft working far out in the Atlantic. (Though Olaus Magnus's work was not published till 1555, the information quoted actually refers to a much earlier period.)

'In *February and March*, and also in *January*, the Inhabitants of this Country go in strong ships to fish from the shore into the Deep: as far as they can sail in two days, carrying with them necessaries for their Food for 20 or 30 days. But the place where they most frequently exercise their Fishing, is between *Norway and Island*. Nor do the Fisher-men, when it is Tempestuous Weather, ride at Anchor, but they fish floting up and down till their ships be full. All the safety consists in

1 See Salzmann, *English Trade in the Middle Ages* (1931), pp. 242-4; Carus Wilson, 'The Iceland Trade', *Studies in English Trade in the Fifteenth Century*, ed. Power and Postan (1933), p. 160.

2 P.R.O., E. 122/150/3m. 7d. *Hanserecesse*, Vol. 1, iv, no. 201; *Hansisches Urkundenbuch*, Vol. viii, no. 1160, pp. 708-9; *ibid.* Vol. x, p. 292 n.; *ibid.* p. 425; *Hamb. Käm. Recht.*, Vol. 11, p. 130; *ibid.* Vol. 111, p. 14; *Das Seebuch*, ed. Koppmann (1876), *passim*; Pagel, *Die Hanse*, pp. 258-9; Kratsschmer, *Die italienischen Portolane des Mittelalters* (1909), pp. 198-9.

3 *Cock Lorrell's Boat*, ed. Roxburghe Club (1871); Olaus Magnus, *Historia de gentibus septentrionalibus* (1555), p. 343; S. E. Morison, *Admiral of the Ocean Sea*, Vol. 1, p. 245.

coming again to the shore, as they are directed by the Marriners compass; for by this, when the Winds rise, they know how to steer their course.'¹

The compass was apparently also in use, in the fifteenth century, in comparatively small English craft. At any rate, according to the *Libelle of Englyshe Polycye*, mariners used to shape a course for Iceland 'by needle and by stone'; and we know from other sources that throughout the century a considerable proportion of our Iceland-bound fleet consisted of fishing doggers.²

From the German rutter, *Das Seebuch*, we learn that the mariners of the German Hanse steered by the compass in conjunction with the line and lead. The sounding-line played a vitally important part in Northern navigation. Thus it is recorded in the Hanse archives that a merchantman of Danzig, arrested at Plymouth in 1449, was deprived of her line and lead ('lyne und loth') by the local authorities to make certain that she did not escape. The operation of casting the lead is clearly shown in various fifteenth-century illustrations both here and abroad.³

G. J. MARCUS

THE STRANGE STORY OF THE SPANISH MAN-O'-WAR *SAN TELMO*

In the year 1814 at the conclusion of the Peninsular War, when Ferdinand VII of Spain re-occupied the throne from which he had been driven by Napoleon, one of the urgent problems with which he was confronted was the matter of the revolting colonies in South America. These colonies, supposing, and not without reason, that the Mother Country was completely down and out, and incapable of helping them in any way in the future, had declared their complete independence. Needless to say this arrangement by no means suited King Ferdinand, faced as he was with an empty treasury and a country ravaged and impoverished by years of war. It was for him a matter of urgency to send a fleet and an army to recover the lost colonies, and to prevent the rot from spreading to others. But alas there was no fleet, the Spanish Navy was non-existent, and there was no hope of creating one at short notice. The only hope was to buy one. In August 1817 a secret Conference was held between the Russian Ambassador, Tatischev, don Francisco Ramón de Egina, and Ugarte, the King's favourite, with the object of acquiring, as soon as possible, ships of war from the Russian Government. Several officers of the Spanish Navy were sent to Cronstadt and there decided on the acquisition of five ships of the line and three old frigates.

This squadron sailed from Cronstadt in January 1819 under the command of the Russian Admiral Müller, and proceeded to Cadiz, where, after survey, the ships were found to be seaworthy and acceptable, and the deal was closed. The ships were renamed *San Telmo*, *Alejandro*, *Pronta*, *Prueba*, *La Ligera*, *Viva* and *Mariana*.

A few months later a naval division was formed consisting of the ships of the line, *San Telmo* and *Alejandro*, each of 74 guns: the frigate *Prueba* of 40 guns, and others, such as the *Mariana*, for the transport of troops and war-like stores. Although the *San Telmo* appears in this list as a 74, she is otherwise and elsewhere described as a great three-decker, so possibly her lower-deck guns had been disembarked to make room for troops. This squadron set sail for Peru, commanded by don Rosendo Porlier y Artegueta, a valiant and experienced officer who had fought at Gibraltar under Gravina. Also in the Squadron were don Melitón Perez del Camino in command of the frigate *Prueba*; don Blas de Arana, and don Ioaguín de Toledo, a man of little luck, who had suffered shipwreck several times, and had been severely wounded in the second battle of Buenos Aires, between the English and the Spaniards in 1806, in which the Spaniards under the command of don Santiago de Liniers were victorious.

1 *Historia de gentibus septentrionalibus* (English trans., 1658), p. 223.

2 *Libelle of Englyshe Polycye*, ed. Warner (1926), p. 41; *Islandske Annaler*, ed. Storm (1888), pp. 290-1; *Diplomatarium Islandicum*, Vol. IV, no. 330; *ibid.*, XVI, *passim*; *Paston Letters*, ed. Gairdner (1910), Vol. III, pp. 367-8. See also *The Cely Papers*, ed. Malden (1900), p. 177; *M.M.*, Vol. XXV, p. 173.

3 Koppmann, *op. cit.* c. 7, i *et passim*; *H.U.*, Vol. VIII, no. 21, p. 10; *Archaeologia*, Vol. 57 (1899), Plate III, fig. 2; Max Lehrs, *Der Meister W. A.* (1895), ff. xi-xiii; Vogel, *Hansische Geschichtsblätter* (1911), pp. 28-9, and also *Geschichte der deutschen Seeschifffahrt*, pp. 522-7.

Toledo was the second-in-command of the *San Telmo*. This ship, according to the tradition unearthed by the novelist San Martín, was a handsome vessel of 3 gun decks; her hull was painted black and she had a very high poop. With a ship's company of 640, she carried several companies of the infantry of marine.

On 11 May 1819 the Squadron sailed for El Callao; a month later the *Alejandro* returned to Cadiz in a leaking condition.

Some months afterwards news was received that the frigate *Mariana* had arrived at a Peruvian port on 9 October, and that the *Prueba*, Captain don Melitón Pérez de Camino, had reached the latitude of Callao, and there being an enemy squadron in those waters, she had put in to Guayaguil.

Weeks, months, and years passed. Nothing was seen or heard of the *San Telmo*. There was no news of her having been wrecked anywhere on the coast, nor of her having met with disaster of any kind. Many small ships, it is true, have foundered in the terrible seas around Cape Horn; but there was a great, well found and fully manned man-o'-war; it was unlikely that she should have been overwhelmed by sea and storm.

The great black ship had just disappeared as by enchantment.

San Martín relates that a year or two after the disappearance of the *San Telmo* a gentleman named don Andrés Arévalo embarked at Callas in an Italian vessel called the *Volturmo* bound for European ports. Rounding Cape Horn, the *Volturmo* encountered very heavy weather and intense cold. One morning her people sighted an ice-island of great size, such as are not infrequently met with in those waters in the summer seasons, it was more than a mile in length and above the blinding whiteness of its surface could be seen a black mass. As they approached more closely they could distinguish the hull of a great ship.

The weather by now having moderated and the *Volturmo* sailing in the sheltered waters under the lee of the floe, a boat was lowered and the Captain, Arévalo and four seamen rowed over to the ice-island. As they approached the black ship they saw that she was indeed a huge vessel; she had been dismasted, and was all that remained of a great 3-deck man-o'-war. From her open main deck ports the muzzles of her guns still protruded. The ship had apparently run head on to the ice in such a manner that she had mounted the floe and buried her bows far into a great crevasse which held her as in a gigantic vice from which there was no escape. The after-part, however, was still in open water and rowing round it the sailors could clearly make out an heraldic shield with the arms of Spain and below them in large letters the name *San Telmo*.

The occupants of the boat all hailed loudly together, but there was no answer. Then the Captain decided to try and climb on board by way of the rudder chains and he and Arévalo succeeded in forcing an entrance through a lower deck port. The ship was deserted, there was no sign of life of any kind below decks. On the half deck and in the officers' cabins all was confusion and disorder, just as it had been left by the men abandoning the ship in haste. Here were their rich uniforms, their cocked hats, cloaks and swords, covered with a coating of ice and dust.

Mounting the ladder to the quarter deck, the Captain and Arévalo saw a man seated, enveloped in a cloak, his elbows resting on his knees and his head buried in his hands. They approached him silently; he was dead, stiff and petrified by the terrible cold.

Shocked and amazed they mounted the ladder to the great cabin under the poop. It was immense, lofty and luxuriously furnished; on a velvet divan, stretched rigid as a marble figure, lay the dead body of the Commander; his hair and beard were long and unkempt and he wore a tarnished, richly laced uniform. A few paces away was the mummified body of a dog.

It was evident that while rounding the Horn in the spring of 1819 the *San Telmo* had sailed right on to the ice floe, and her people, after exhausting every effort to free her, realizing the hopelessness of their situation had decided to abandon the ship and take to the boats in the hope of being picked up by some passing vessel, or possibly of reaching land—they all perished.

In the *San Telmo* there remained only the Commanding Officer, a sergeant of the Marine Artillery and a dog.

The two men no doubt lived on for many days, and perhaps months or at any rate long enough to have consumed all their victuals; and then came the end. The sergeant wrapped himself in his cloak, sat down on the poop ladder and slept till death overtook him.

Then the dog died, and the Commander, worn out at last with cold, hunger and fatigue, stretched himself on his divan and slept, never more to awaken in this world.

The sergeant's name was Matias Alvarez. Who was the dead Commander? Porlier, Toledo or don Blas de Arana? No one knows.

From San Martin's account, it is not apparent that the Italian Captain and Arévalo made any search for the *San Telmo's* log book or other documents which might throw light on the cause of the disaster or disclose the names of the Commander and officers. The boat party may have taken the log book and other papers with them.

We do not know if the ship had been dismasted before she struck.

Is it possible that she is still in existence; for ever drifting with her dead Commander round the Polar Sea?

A. MACDERMOTT

SAILORS' BAPTISM

After reading Mr Henning Henningsen's very interesting article about Sailors' Baptism, I made some inquiries from seamen from Arklow, the most maritime-minded town in Ireland. Those whom I asked had memories of having heard of seamen-initiations similar to those mentioned in the article. They were also categorical about the tradition, in force till quite recently in the Arklow-owned schooners, whereby a new member of the crew going to sea for the first time had to 'buy his standing' with drinks all round. A curious custom in Arklow fishing vessels only recently dead was for the owner of the vessel to present £1 to each member of the crew as soon as her complement was made up and she ready to make her first trip to sea of the season.

J. DE C. IRELAND

SOME CHRONICLES OF THE LARKINS FAMILY

The reference in the above article (*M.M.* May 1954) to the 'unreasonably humane conduct' of Captain Arthur Phillip (wrongly spelled Phillips) may give the impression that Phillip was a rash sentimentalist. Perusal of the official correspondence printed in the *First Fleet* (edited by Owen Rutter and published by the Golden Cockerell Press) and in the *Historical Records of New South Wales* and the *Historical Records of Australia* together with the article on Phillip in the *Dictionary of National Biography* will reveal that Phillip was a naval officer of sound judgement and considerable ability. The successful manner in which he discharged his duty as Commodore of the first fleet on the voyage to Botany Bay affords strong evidence of this, but his achievement in this regard is over-shadowed by the courage and fortitude with which he faced and the ability by which he overcame the appalling difficulties that confronted him during his term of office as Captain-General and Governor-in-Chief of New South Wales.

The number of convicts carried by the *Surprise*, *Scarborough* and *Neptune* is recorded in a return furnished by Phillip and enclosed with his despatch of 13 July 1790 to the Rt.-Hon. W. W. Grenville. The following particulars are taken from the copy printed in the *Historical Records of Australia*:

Ship	Number of convicts embarked		Died on passage	
	Males	Females	Males	Females
<i>Surprise</i>	256	—	36	—
<i>Scarborough</i>	259	—	73	—
<i>Neptune</i>	424	78	147	11
	939	78	256	11
Total number embarked	1017			
Number who died before leaving England	11			
	1006			
Died on the passage	267			
Number landed	739			

Mr Bovill opines that the Government sought to use East Indiamen as transports because they were the largest merchant ships afloat, but official records indicate that initially they were preferred for economic reasons and at a later stage were used to prevent ill-usage of the convicts and other irregularities. East Indiamen were chartered only for the passage to Botany Bay, and after discharging there sailed at their own charge to China or India to load for the return passage to England. As the East India Company's charter prohibited other merchant ships from carrying cargo on the return passage the Government had to bear the expense of the round voyage when such ships were employed.

Whale-ships sailing to the fishing grounds in the South Seas afforded another means of cheap transport, as the restrictions imposed by the East India Company's charter compelled these vessels normally to make the outward voyage in ballast and a number of these ships were chartered to sail in the third fleet.

When the last-mentioned fleet was discharging in Port Jackson it was discovered that four of the ships had clandestinely shipped 'a considerable quantity of copper lead iron and cordage' for sale at 'a Portuguese settlement in India'.

Phillip thereupon wrote two despatches to Lord Grenville, in the first of which, dated 8 November 1791, he reported the discovery of the illegal cargoes. The second dated 25 *idem* reads: 'This settlement is not mentioned in any Act that I have seen and it does not appear to me that while the ships are riding in this harbour I have a power as Governor or Vice-Admiral of this territory to take out the copper lead iron and steel they have on board altho' I have not any doubt but that the ships would be seizable at sea.'

On the 15 May 1792 the Rt.-Hon. Henry Dundas replied to Phillip as follows: 'The articles clandestinely carried out by the transports and not delivered in New South Wales in point of fact are to be considered as belonging to the Navy Board and therefore, altho' I commend your caution, I would have been better satisfied with your having made a seizure of them.'

'It is proposed for the future to transport both the convicts and such articles for the settlement as shall be sent from hence by ships in the service of the East India Company and I trust that by this means the evils which have hitherto subsisted will be put an end to.'

This despatch was forwarded to Phillip by the *Royal Admiral*, and on 11 October 1792 Phillip answered it as follows: 'I am honoured with your letter by the *Royal Admiral* dated 15 May last which ship arrived here the 7th instant.'

'Of the convicts embarked on board that ship ten men and two women died on the passage and four children were born—one of whom died—one male convict escaped at the Cape of Good Hope and seventy-two men eleven women and five children have been landed sick. I have no doubt but that strict justice has been done them and hope the sending out convicts and stores by ships employed in the service of the East India Company will answer the end proposed by Government, but Sir, if I was to give an opinion, I think the people have been too much crowded on board this ship.'

On her second voyage to New South Wales the *Royal Admiral* arrived at Port Jackson on 21 November 1800. On 10 March 1801 Governor King reported that 43 convicts had died on the passage and that those landed were still in a very weak state. On 30 October 1802 King made a further report stating: 'Many of the people who arrived by the *Royal Admiral* are in a state of great debility nor do I apprehend that they will ever recover the strength of men.'

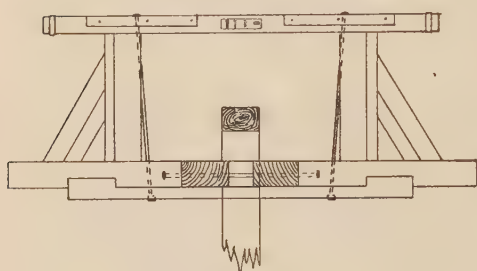
The following particulars appear in the record of ships entering Port Jackson during 1800: '*Royal Admiral*—Master, William Wilson—English built—923 tons—24 guns—70 men—Built London 1777—Registered London—Owners Gabriel Gillet and William Wilson—General Merchandise—From London, touched at Rio de Janeiro.'

ALLAN E. BAX

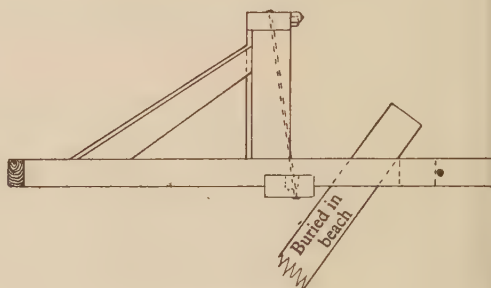
OLD-STYLE BEACH CAPSTAN

The reputation of the Deal lugger is well known, but possibly few people realize that there is now not one in existence, nor are there any plans or models.

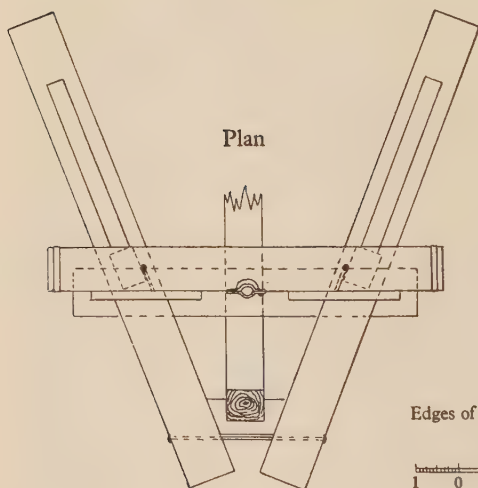
The Deal boats were of five main classes: the forepeakers and catboats, the galley punts, galleys and foresail-mizzen punts. The term 'lugger' was understood locally to refer to forepeakers and cats only. As early as 1912 all the cats had gone; the last forepeaker (*Cosmopolite*) was being



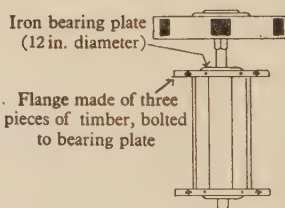
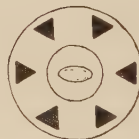
Inshore elevation



Side elevation

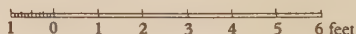


Plan

Iron bearing plate
(12 in. diameter)Flange made of three
pieces of timber, bolted
to bearing plateThe centre oval bears
the maker's name
(now illegible)

Edges of all timber chamfered

Beach capstan ca. 1830



'preserved' by the local council, one galley punt (*Ocean Queen*) and a sprinkling of galleys and foresail-mizzen punts were still in service. In 1949 there was only one foresail-mizzen punt and four galleys in varying stages of decay. To the best of my knowledge the only plans in existence are of a galley and of a second-class galley punt (a 'two-hander'). There is one reliable model, of a galley, in the Science Museum.

During my researches into these historic craft I have been able to preserve on paper the details of the last remaining capstan, which was lying in pieces on what remains of the North Deal beach. This was a 'medium' capstan, its head having holes for six bars, and was used for galley punts. The luggers' capstans were of the same pattern, but had larger heads, to take ten bars. The small capstans, for galleys and below, were of the same design but more lightly built and had wooden heads,

about 15 to 18 inches high and 10 inches square, with two square holes right through to take two long bars at right angles to each other.

As a 'brake' a short bar was inserted in one of the holes and lashed to the end of the top horizontal timber of the capstan. This lashing was always placed at the southern end of this timber—the right-hand end in my plan.

The Deal boats were known as 'South-enders' or 'North-enders' according to whether they hove up to the south or north of the town centre, and it is an interesting but puzzling fact that the only difference between the north-end and south-end capstans was that at the north end the end of the timber which was buried in the beach was cut off at right angles (as in the drawing) while at the south end it was cut off horizontally.

WILLIAM H. HONEY

QUERIES

1. FILMS. Has anybody yet made a serious study of the considerable number of interesting maritime films which have been produced in many countries in the years since the foundation of the Society for Nautical Research? It is surely time such a study were made, and a provisional list published of the most valuable of these from the maritime-technical and historical points of view, with the possible aim of ultimately establishing an international library of maritime films.

The kind of films I have in mind—a very short list chosen at hazard to begin with—are the British films *San Demetrio*, *London* and *The Gift Horse*, Robert Flaherty's *Man of Aran* (which surely qualifies as a maritime film), *Casabianca*, the French film of the exploits of the late Captain Lherminier and the submarine in which he broke out of Toulon and subsequently assisted in the liberation of Corsica, and the Russian films *Battleship Potemkin* and *Admiral Nakhimov*.

J. DE COURCY IRELAND

2. MUTINIES. In what books, if any, are there accurate accounts of the following: the mutiny of the German navy at Kiel in 1918; the mutiny on board the Dutch coast defence battleship *De Zeven Provinciën* in Indonesian waters in, I think, 1934; the mutiny of part of the Greek navy in connexion with the rebellion in Crete early in 1935; the mutiny on board some units of the Portuguese navy during the Spanish Civil War, in 1936 or 1937; the mutiny in the British-Indian naval service in February 1946?

J. DE COURCY IRELAND

3. MELLOWS AND McCLURE. In Vol. v of *Battles of the Nineteenth Century* by A. Hilliard Atteridge, pp. 305–14, mention is made of a Mr Mellows, former seaman gunner of the British Navy, and of Captain McClure, R.N., in connexion with the Chinese Navy in the Sino-Japanese War of 1894. Can anybody supply any details of the previous and subsequent careers of these two men, their place and date of birth, or any other particulars?

J. DE COURCY IRELAND

4. O'BRIEN AND PORCEL. Mention is made in Austricliano de Carvalho's *Brasil Colonia a Brasil Imperio*, Vol. 1, pp. 132 ff. of two Irish seamen, O'Brien and Porcel (?Purcell) exploring the Amazon basin and parts of the Guianas in the 1620's. Where can further details be obtained of these individuals?

J. DE COURCY IRELAND

5. INCHCAPE ROCK. Some sixty years ago, a popular story for juvenile recitation was that of the Inchcape Rock and its bell-buoy, which, it seems, was scuttled by a sea-bandit, one Sir Ralph the Rover; some time later, this pirate's own ship was lost on the very rock from which he had removed the bell. Is there any record of the method that was used by the Abbott of Aberbrothock in the construction of this bell-buoy?

It can be assumed that the bell itself was of the type used in churches or chapels at that time, and it would need to have been of a fair size to be effective at sea. As to the float, this possibly was made up of one or more large casks or big barrels, to support a good sized bell. It is, however, quite possible that the float was made of a very large *tree-trunk* or log, with the bell carried on a branch

which protruded uppermost above the water. It would seem that the bell was secured to the float by rope lashings since the poem records that: 'Sir Ralph lean'd over from the boat, and cut the Bell from the Inchcape Float.'

W. A. WOODWARD

6. UNIFORM IN 1807. From *The Times*, 20 May 1954: 'A farmer at Hvide Sande, Denmark, regularly wears a British naval uniform which was taken from the body of a seaman washed ashore in 1807...' Some description of the said uniform should prove of interest to students, if members can say more about it. I suppose it refers to some slop chest stuff, as, if memory serves, real uniforms for seamen in the R.N. were not introduced before 1856.

GUILLEUX LA ROËRIE

7. TALIPIS. A paper of somewhere about 1800 containing hints and information for the maker of a model of what seems to have been a cutter begins as follows: 'Remarks concerning the Talipis, viz. the red line that seems to form the transom, will be of use to you, as I expect you do not know how to apply it—But you must work the Body through fair from the other stations, the moulds to which must be applied square, both from the keel and the middle line.' Then come a few suggestions for improvements in the draught, a table of sizes of spars, directions for using brass lacquer and finally this second paragraph about the Talipis: 'In digging out the Talipis you will not attempt to leave the wood whole across the stern, but take it out about as far down as the middle of the hollow at the pencil line drawn square across it and put a piece in with the grain lengthways and rabbit it into the sides and along the transom.'

The writer is evidently dealing with the shaping of the tuck in a dug-out model, but the word 'talipis' it quite new to me and I should be glad to be told its exact meaning and its origin. Can it be a mere corruption of 'tail-piece'?

R. C. ANDERSON

8. THE BALLINGER. I read in Query 16 (1954) PICARDS, that it is stated: 'indicating a type of boat used in whaling, like a ballinger'. It is, of course, known that a 'ballegeer' or a 'bollengier' has existed in Belgium, and that this vessel was used also in the sixteenth and seventeenth centuries as a ship of war, but up to now I have been unable to trace any indication or reproduction of this type of craft. I would be most grateful if any of your readers could let me have a reproduction or some further information regarding the 'ballinger' as mentioned by Mr Farr.

R. DE BOCK

9. 'RYBBES' AND 'SUSTERYs'. In the *Treatise on Rigging*, 1625, we are told that, as in the fifteenth century, 'the parrell is framed of a rope, trucks, and ribs or sisters.' This might imply either that 'sisters' had then become an alternative word for 'ribs', or that certain parts of the parrel in some way unlike its ribs were given a distinguishing name. The former seems more likely, for we have no pictorial evidence, or evidence from models either, to support the latter interpretation.

No picture gives the detail of a parrel of the early fifteenth century so as to show anything additional to ribs and trucks, but a guess might be made that 'sisters' were then serving the same purpose as the two-holed deadeye usually lashed in the bight of a lateen parrel-rope. From this deadeye the two ends of the parrel-rope pass through holes in all the ribs and trucks and then come back to pass through its own two holes before joining at the truss, which is slackened or hauled taut as required. Such a 'dead man's eye' is given as part of the lateen mizen yard parrel of a square-rigged ship in the 1625 *Treatise*, p. 14. On p. 16 there, 'misson yeard' should read 'misson topsayl yeard', for it is this that has a 'parrell framed as other parrells'.

In 1410-12 we find two sisters to each parrel or 'rakke'. This might imply that each sister was one of a pair of bull's-eyes, lashed one over the other, that served instead of a two-holed single deadeye. The only other guess possible seems that in the 1418 parrel two of its ribs, presumably end ones, were cut to a slightly different shape and so got a different name, and that by 1625 this slight difference, whatever it was, had ceased to exist, so that 'sisters' and 'ribs' were used as alternative names. The proportion of 3 sisters to 29 ribs still remains a difficulty, but each number seems beyond requirement for a single parrel.

R. MORTON NANCE

10. THE EARL OF DUNDONALD'S INVENTION. It is recorded that one of the very many inventions to the credit of the famous Earl of Dundonald, was a proposal to use the oscillation of a mass of

mercury as a means of ship propulsion. It is assumed that the mass of mercury would be set in motion by the rolling or pitching of the vessel to which the mechanism was fitted.

It would be very interesting to know if there is any record of the kind of mechanism that was to be employed for this most original method of propulsion. The system might even have been a form of 'reaction or jet-propulsion', using a pump to eject water at the stern.

Such a mechanism *could* have been very simple indeed, as a mass of mercury which was enclosed in a tank might have been arranged to press against a form of piston or diaphragm made of leather; on the reverse side of this diaphragm a water compartment could have been provided with intake and output ducts (and the necessary valves) at stem and stern.

The date of the proposal is recorded as in the year 1833.

Other inventors had, previous to this date, built vessels propelled by water-jets actuated by steam engines without rotary motion.

W. ADAM WOODWARD

11. THE FIRST H.M.S. *ANSON*? The list of Plymouth-built ships given by Mr Millard in 1946 included an *Anson* 38 said to have been launched in 1736. Her tonnage was given as 1369, which is far too great for the number of guns at that time and is in fact identical with that of the 64-gun *Anson* of 1781 which was afterwards reduced to a 38-gun frigate. Apart from this matter of size there is the consideration that 38 guns would be an extremely improbable rating in 1736 and that it seems unlikely that a ship would be named after Anson so early in his career. If such a ship did exist, it would be interesting to know more about her.

R. C. ANDERSON

12. THE ROMAN GALLEY OF THE TIBERINE ISLAND. Can one be certain that the remaining section of the Roman galley of the Tiberine Island is the port side and not rather the starboard quarter? This enquirer has no knowledge of the features of a Roman galley; but always understood that the Island was made to simulate the galley with the delegation returning from Epidaurus, and that it was proceeding upstream when the serpent swam ashore.

Are the vestigial features such as could only be the port side for'ard and such as to exclude the possibility of being the starboard side aft?

If M. Rubin de Cervin is right, then the stone galley was devised as proceeding downstream.

M. SCOTT

ANSWERS

2. (1911.) BY THE WALLS. On page 30 of Vol. I of the *Mariner's Mirror* is a query seeking instances of the use of the expression 'laying her by the walls' quoted from a letter by Sir Samuel Hood (Hannay, *Letters written by Sir Samuel Hood*, p. 9). The inquirer suggested that the expression meant that the ship would be laid up by the dock-yard wall—condemned to uselessness. The query is followed by the following (apparently editorial) note: 'The phrase is still in use with the same meaning, i.e. "by the dock-yard wall": but it would be interesting to trace its history. Smyth (*Sailor's Word Book*, 1867) oddly enough does not give it.'

As I believe that no other instance of the use of this expression has since appeared in the *Mariner's Mirror* I venture to report that I recently found it used in a 21-page pamphlet entitled 'Reasons / for settling / Admiralty-Jurisdiction, / and / giving encouragement to Merchants, / Owners, Commanders, Masters of / ships, Material-Men and Mariners / humbly offered to the consideration of His / Majesty, and the Two Houses / of Parliament. / Printed in the year 1690.'

On page 8 appears the following marginal note: 'The Admiralty to order ships to be set out to sea although some part-owners refuse to contribute' and opposite it the following:

'2. If a part-owner refuses to contribute to the setting out of a ship, the Admiralty-Court uses to take bail of those that would set the ship forth, to return her within a competent time, or else to pay the other part-owner that refuses to contribute for his part, according to an appraisement then made: And if this practice of the Admiralty should be interrupted, it would be in the power of one

cross part-owner to keep the ship by the walls, the consequence whereof may be easily imagined; yet the Admiralty is many times obstructed in the cases following, viz. . . .

The 'cases following' set out the circumstances in which disputes arose between part-owners and how the obstructing parties stayed the proceedings in the Admiralty Jurisdiction by obtaining a Prohibition or Injunction at Common Law but are not relevant to the phrase under discussion.

ALAN E. BAX

4. (1937.) EAST INDIAMAN, 1752. The portrait of the East Indiaman *Falmouth* reproduced by both Holmes and Whall was taken from a plate in *Chronicles of Blackwall Yard* by Green and Wigram (1881), p. 27. The original was there described as 'now hanging in the office at Blackwall'.

R. C. ANDERSON

6. (1954.) NAMES OF MONITORS. T. D. Manning is not quite correct. The four monitors in question were laid down under their American names and received numbers for only about 3 weeks in June 1915 before being given their English names. Far from the renaming having all taken place before launching, the dates of officers' appointments indicate that some of the ships were commissioned in May when they were still under their American names.

W. E. MAY

9. (1936.) CHILINGOE. Mr Lyman's suggestion (1954, p. 243), that a *chilingoe* might be the same as a *kirlangitch*, is attractive at first sight, but unfortunately the incident mentioned in the Query proves to have taken place (in 1758) in the neighbourhood of Madras, whereas the *kirlangitch* was a Mediterranean or Black Sea type.

The answer as to the nature of a *chilingoe* was unwittingly provided by Mr Hornell in 1942 in the course of an article on Arab craft. He quoted a writer of 1833 as calling certain Arab vessels on the African coast by the name of *chelingas* and explained that this was an unjustified transference of the name of the sewn-plank surf-boats of the Coromandel Coast of India. Jal gives the form *chélingue* with the same employment and habitat. Whether the vessels destroyed in 1758 were indeed mere surf-boats or something larger, it is impossible to say.

Mr Lyman gives various references to the *kirlangitch* under various forms of the name, but may be interested, as an American, in the fact that 'the kirlangitch of the Kapudan Pasha' is mentioned several times in connexion with the operations off Kinburn in 1788, when Paul Jones was in command of the Russian sailing-ship fleet. In one Russian account the Turkish fleet is described as containing '47 galleys, kirlangitches and gunboats'. This suggests that the *kirlangitch* might be a rowing vessel rather smaller than a galley, but we are told that the one belonging to the Kapudan Pasha 'sailed like the wind' and this, together with Smyth's 'swift-sailing boats', makes it probable that she was, as Mr Lyman believes, more like a xebec.

R. C. ANDERSON

13. (1954.) TUG-BOATS. In reply to Mr W. Adam Woodward's Query, I can assure him that a fleet of sampans was used to tow tea clippers from Pagoda Anchorage at Foochow down the Min River and clear of the bar. Propelled by two or three yuloh's or sweeps these gayly painted craft must have presented a colourful sight towing a stately clipper against a background of sheer granite cliffs and pine-clad hills.

It seems strange that there is no print or sketch recording this activity.

The tow ropes must have been secured to the masthead of the sampan in the usual Chinese manner permitting maximum manoeuvrability in a swift flowing, narrow river.

Where there is a tideway an anchor would be used to dredge the ship down and, with wind, to snub or sheer clear of obstructions.

A favourable wind and ship's boats would have been used in most ports.

The tow rope would have been secured to a bridle led round the boat's stem and becketed to the thwarts.

I. MACROBERT

15. (1954.) ACTION ON LAKE CHAMPLAIN. Possibly the following information may be of service to Mr H. F. Pullen. On 3 December 1776, William Faden, the eminent map publisher issued a map with the following title:

'The Attack and Defeat of the American Fleet under Benedict Arnold by the King's Fleet,

Commanded by Sir GUY CARLETON, upon Lake Champlain, the 11th of October 1776. Engraved by Wm. Faden, Charing Cross. From a Sketch taken by an Officer on the Spot.

London, Dec. 3, 1776 by Wm. Faden'

Size $16\frac{1}{4} \times 10\frac{1}{4}$ in. It will be observed that Sir Guy Carleton is described as the Commander. No printed description attached to the foot of the map was published with this issue.

Faden published a later issue but with the same imprint in which 'Capt. Tho^s Pringle' was described as the Commander. It bears the following title:

'The attack and Defeat of the American Fleet under Benedict Arnold by the King's Fleet, Commanded by Capt. THO^s PRINGLE, upon Lake Champlain, . . . (as above) . . . on the Spot.

London, Dec. 3, 1776 by Wm. Faden.'

Size $16\frac{1}{4} \times 10\frac{1}{4}$ in. Below the plan, type-printed on the same sheet of paper in 3 columns, is 'An Account of the Expedition of the British Fleet on Lake Champlain under the command of Capt. Thos. Pringle and of the Defeat of the Rebel Fleet commanded by Benedict Arnold on the 11th and 13th of October 1776. Taken from the letters of Sir Guy Carleton, Captains Douglass and Pringle, dated off Crown Point 15th October 1776.'

This printed matter occupies a space of $15\frac{1}{2} \times 7\frac{1}{4}$ in.

HENRY STEVENS

15. (1954.) ACTION ON LAKE CHAMPLAIN. The opening chapter of *Edward Pellew, Viscount Exmouth* by C. Northcote Parkinson gives a detailed account of the British flotilla actions on Lake Champlain in October 1776. From this account, and the other works listed below, there is no doubt that Captain Thomas Pringle from the *Lord Howe* was the officer actually in charge of the British naval force on the lake, and that he commanded in person in the different encounters. Captain Charles Douglas remained in command of the St Lawrence squadron at Quebec.

Captain Douglas of H.M.S. *Isis* had sailed from Portland on 11 March and arrived in Quebec on 6 May, after forcing his way through the river ice. Thus as in the spring of 1760, Quebec was relieved and the fate of Canada decided by the arrival of a ship of war. Captain Douglas immediately undertook to carve out ships of war from the bordering forests for use on Lake Champlain, and he appointed Captain Pringle commander of the lake flotilla. Douglas, having appointed himself a commodore at Quebec, organized the naval movements prior to the lake actions, and indeed visited St John's at the head of the lake to survey the reconstructed ship *Inflexible*. Nevertheless, he was not present at the actions of 11 and 13 October, but remained in Quebec where he received the news of victory over Arnold's flotilla from Pringle and General Sir Guy Carleton, the latter being in command of the army and with Pringle in his flagship the schooner *Maria*.

This is substantiated by the *Historical Documents, Literary and Historical Society of Quebec*, 8th series, 1906; Digby's *Journal*; Mahan's *The Major Operations of the Navies in the War of American Independence*, and the same author's *The Naval Campaign on Lake Champlain in Scribner's Magazine*, February, 1898; Fenimore Cooper's *History of the Navy of the United States of America*, Vol. 1; Palmer's *History of Lake Champlain*, ch. vii; and Gardner W. Allen's *A Naval History of the American Revolution*, Vol. 1. In the last work, Pringle's report of the flotilla action near Valicour Isle and Crown Point is quoted as appearing in the *London Chronicle* of 26 November 1776. As a result of the lake victory, Pringle was posted and Douglas was given a baronetcy, the latter being rewarded despite criticism at home for making himself a commodore.

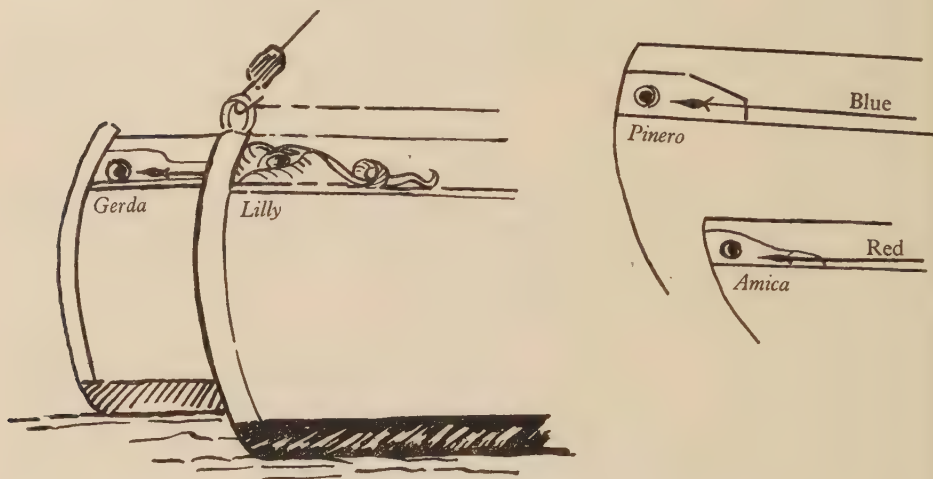
Two interesting aspects, as they affect Canada's naval story, arise from this query. Douglas in his self-named 'terraqueous warfare' was engaged during the summer of 1776 in a ship-building contest with the American naval commander Benedict Arnold. Thirty-six years later a similar contest in ship-building began in the struggle for Lake Ontario in the war of 1812, as described by C. Winton Clare in 'A Shipbuilders' War', *Mariner's Mirror*, July 1943. The second interesting aspect is whether or not Lieutenant William Pringle Green, born in Halifax, Nova Scotia, in 1785, and who served in H.M.S. *Conqueror* at Trafalgar, was a relation of Captain Pringle of Lake Champlain fame. Any information on this conjecture would be appreciated.

L. FARRINGTON

18. (1954). 'OCULI' IN EUROPEAN CRAFT. Having just returned from a sailing cruise in the Baltic, I can add a little information.

All the large ketch-rigged motor trawlers lying in the small fishing harbour at Kåseberga near Ystad in South Sweden, carried a form of oculus framing the hawse hole.

The illustration is a sketch made from notes drawn on the spot.



The most simple background on a rather shabby ship, was merely a painted shape to look like a strengthening piece and indicated by the harpoon-like end of a painted line along the top strake. Other vessels had wooden strengthenings in various simple shapes, while the smartest ship of all had hers carved in the form of a quite beautiful dolphin whose eye was the hawse hole. The names of the ships were a bit unexpected too for those waters, one being *Pinero* and another *Amica*. I do not recall ever having seen this survival in any other harbour either in the Baltic or along the south coast of Norway and west coast of Sweden.

ROMOLA U. ANDERSON

19. (1954.) HADLEY'S QUADRANT. There is no mention of a spirit level in Hadley's original description of his reflecting octant (*Phil. Trans. Roy. Soc.* Vol. xxxvii (1731), no. 420, p. 147), or in his report of the trials in H.M.S. *Chatham* (*Phil. Trans. Roy. Soc.* Vol. xxxvii (1732), no. 425, p. 341). I am of opinion that the statement that he proposed to use one has arisen through the habit of accepting references without checking them. S. P. Rigaud (*Nautical Magazine*, Vol. iv (1835), pp. 138-9) says that Hadley fitted a spirit-level to a quadrant but does not make it at all clear that this was a common and not a reflecting quadrant. Hadley in his patent (No. 550 of 22 November 1734) is also rather ambiguous but it is quite clear when the patent is read in conjunction with the *Phil. Trans.* papers, Through failure to check Rigaud's reference I was guilty of mistaking his meaning (*Nautical Magazine*, Vol. cliii (1945), p. 24) and it is most probable that others have done the same. Rigaud's reference is evidently the same as that mentioned by Grenville D. Zerfass and should be *Phil. Trans. Roy. Soc.* Vol. xxxviii (1733), no. 430, p. 167 (there appears to be a misprint in the *Mariner's Mirror* for August 1954). This is probably the origin of the story that Hadley fitted a spirit-level to a reflecting quadrant, though it must be stated that in the National Maritime Museum there is a Hadley's octant made by Cole which is fitted with a spirit-level and is believed to date from about 1760.

In using Hadley's common quadrant with spirit-level, as with John Elton's and Charles Leigh's fitting of levels to Davis's quadrants (*Phil. Trans. Roy. Soc.* Vol. xxxvii (1732), no. 423, p. 273 and Vol. xl (1738), no. 451, pp. 413 and 417), the observer faced the flat of the instrument and

saw the shadow or light ray from the sun fall on the centre of the horizon vane at the same time that he saw that the liquid in the level was central. There was no attempt at obtaining a coincidence as we should expect to do nowadays.

Caleb Smith fitted a spirit-level to his reflecting quadrant about the year 1744 (*The Description, Use, and Excellency of a New Instrument, or Sea Quadrant, invented by Caleb Smith*, n.d.)

Grenville D. Zerfass suggests that as Hadley's common quadrant with spirit-level was fitted with a supporting staff it must have been intended for land use exclusively, but Hadley says it is 'for taking a Meridional Altitude at Sea,' and this is not the only use of such a support. Vasco da Gama used a tripod to support his wooden astrolabe, though it is not quite clear whether he used this at sea (*The Three Voyages of Vasco da Gama*, Hakluyt Society (1869), p. 45). Hadley himself used a staff for his reflecting quadrant for the *Chatham* trials. Mayer intended a staff to be used with his 18 in. reflecting circle, but Bird actually made it with a belt support. Commander Belcher shows a staff attached to a sextant which was fitted with his artificial horizon (*Nautical Magazine*, Vol. xiii (1844), p. 297), and I have an advertisement of about 1900 showing the use of a staff attached to a sextant with the Hezzanith artificial horizon. Finally, the heavy gyroscopic sextant used in German submarines during the second World War was hung from a strap round the neck, and I believe the observer was advised to rest his elbows on the side of the conning tower.

W. E. MAY

21. (1954.) STEAMER *FARDINE*. The *Fardine* was the first steamer to be built expressly for service on the Canton River. Her dimensions were 85 ft. in length, with a beam of 17 ft. and a draught of 6 ft. She arrived at Lintin under sail from Aberdeen towards the end of the year 1835.

Lintin, meaning Solitary Nail, is a fairly large island in the estuary of the Canton River. It used to be a rendezvous for merchants, and especially opium ships, and was formerly known as the Outer Anchorage for vessels on their way to Canton.

Before her first attempt to steam up the Canton River, the owners of the *Fardine* had asked permission from the Chinese officials. As this was refused a letter was forwarded in December to Howqua, the senior Hong merchant, saying:

'We the undersigned, merchants of all nations, residing in Canton, having for years past experienced much inconvenience from the tardiness and uncertainty of our communications with Macao, where our wives and children reside, as well as from the difficulties attending the conveyance of letters to and from vessels arriving and departing, have procured from Europe, at great expense, a travelling boat of modern construction, propelled by steam and capable of moving against wind and tide.'

They went on to suggest that, as the Chinese officers in charge of the forts might never have seen so unexpected a phenomenon as a self-propelled ship, they should be warned of her approach, in case they might entertain erroneous ideas concerning her. To this the Chinese Hong merchants replied:

'We respectfully inform you, benevolent elder brethren, that we have received the Tuheen's reply which we have faithfully transcribed and present it praying that you, elder brethren, will all inform yourselves thereof. You, and the established authorities of your honourable country, shall obey the orders, that the said steamship is not permitted to enter the port.'

The Governor of Kwantung also wrote a long letter, ending with the following:

'I have already issued orders to the forts that when the steamship arrives they are to open a thundering fire and attack her. On the whole since she has arrived within the boundaries of the Celestial Empire it is right that we should obey the orders of the Celestial Dynasty and order the said foreigners, to ponder well and act in trembling obedience thereto.'

In the Western merchants' view, however, a 'united and determined perseverance on the part of the foreigners, was all that was wanted to carry this into effect,' and they accordingly carried on with their plan that the *Fardine* should proceed up river.

No sooner was the steamer under way than all the local civil and military functionaries, together with the Hong Merchants and the Linguists were thrown into a state of the greatest consternation

and alarm, and orders were issued 'to expel her instantly from the waters of the flowery land' and drive her back to her native country. Consequently, when she arrived off Cheunpee on 1 January, 1836 she was subjected to a tremendous cannonade from every fort on both sides of the Bogue. No damage, however, was done but the *Fardine* immediately pulled out of range and sent a boat in to invite the military authorities to come and inspect the object of their hostile operations. The troops came on board in large numbers, and after a minute search of the ship, the Chinese Admiral requested that his war junk might be towed up and down the Bogue, a request that was promptly complied with. But in spite of this the peaceful though mysterious ship had to return to Lintin.

G. R. G. WORCESTER

27. (1954.) WARSHIPS BUILT AT IPSWICH. The *Bideford* and *Granado* were both built by John Bernard.

R. C. ANDERSON

28. (1954.) H.M.S. *TERRIBLE* (1762). This ship was burnt as unfit for service after Graves's action off Chesapeake Bay in 1781. The ship broken up at Chatham was presumably the French prize of 1747.

R. C. ANDERSON

REVIEWS

THE CHESAPEAKE AFFAIR OF 1807, compiled by JOHN C. EMMERSON. P.O. Box 112, Portsmouth, Virginia. *5 × 8 inches; 223 pages; illustrated.* Price not quoted.

The *Leopard-Chesapeake* affair is one of those minor incidents in naval history which had such exaggerated political consequences that every general history mentions it, and nearly always gets the details wrong. The issue becomes increasingly complex the more we know what actually happened. Consequently, Mr Emmerson's 'compilation', as he calls it to distinguish it from an annotated edition, is very welcome. He has collected the spate of despatches, editorials, speeches, proclamations, minutes of courts martial, etc., which Captain Humphreys's high-handed action provoked.

In order to enforce his demand for the restoration of what he imagined to be four British deserters he boarded the American frigate four leagues off Cape Henry and reduced her to a shambles in ten minutes. The searching of neutral ships for deserters was a daily occurrence, but never before had a neutral warship been so brutally treated and never were the political consequences so disastrous: Jefferson laid an embargo on British shipping and if it had not been for a prompt disavowal on the part of the British government the war of 1812 would have broken out five years earlier. It is satisfactory to note that the documents do not seriously impair the accuracy of James's account, in spite of his well-known anti-American prejudices. What they make clear is that, of the four deserters, three were American citizens and two of them negroes; two were repatriated after some delay, one died and the fourth—a British citizen—was hanged. The complications of the story are a fascinating illustration of the manning problem at that date, since all the Americans had previously deserted from their own ships and some dozen true-born Britons refused to take the opportunity of leaving the American frigate when invited to do so. The English captain may have exceeded his instructions and was certainly politically inept, but Commodore Barron's conduct was despicable, and the culminating tragedy was the fact that he killed Decatur in a duel arising out of the incident. Fortunately for the reputation of his ship she was commanded by a braver man when he met the *Shannon* in the war which this episode did so much to provoke.

The prospective purchaser of this interesting little volume should be warned that it is not printed but duplicated from typescript by something like the monolithic process: the illustrations suffer therefrom, but the text is perfectly legible.

CHRISTOPHER LLOYD

HISTORY OF TRAVELL INTO VIRGINIA BRITANIA. By WILLIAM STRACHEY, Agent. Published in London for the Hakluyt Society in 1953, Series 2, Vol. ciii. Edited by Louis B. Wright and Virginia Freund. *9 × 7 inches; 221 pages; 4 illustrations and maps.* Price not quoted.

Between 1584 and 1609 eight British expeditions had sailed to Virginia, following two of Sir Humphrey Gilbert, in 1579 and 1583, which had failed to reach their destination. Sir Walter Raleigh had begun the great wave of colonization in the New World, but his peculiar genius was not enough to confirm as traditional the harmonious relationship with the Indians which his nominees, Amidas and Barlow, had established in 1584.

When William Strachey set sail in *The Sea Adventure* from Plymouth in May 1609, the fat, as between the Englishman and the Red Indian, was already in the fire. Quite apart from the hazards of the sea crossing, Virginian colonization had become a very hazardous, if not desperate, business.

William Strachey, who became the Virginia Company's first secretary, was a born journalist in the best sense of that much abused word. Never really happy unless he was covering some memor-

able story, he must have thought himself lucky in his misfortune to be in the very one ship of the nine to set sail with him which got blasted by 'the taile of the West Indian Horacano' into the remote Bermudas. For it was undoubtedly his fine account of this tempest, 'A True Reportory of the Wracke . . .', which inspired William Shakespeare.

The 'True Reportory' was written because its author's best journalistic blood was up to the great occasion. There was no ulterior motive for writing it, no preferment to solicit, no patron to ingratiate. Readers of this *Historie* of what Strachey saw after his party had finally reached Virginia will find themselves irritated by mannerisms and artifices which were totally absent from 'The True Reportory'. An impecunious hireling, he had his future to worry about, his value to certain noble gentlemen to establish, his niche as a serious historian to carve. He found it harder, it seems, as he wrote, to write naturally and with originality. Better men than he had covered Virginia before him. There was Hakluyt and John Brereton and James Rosier and the romantic John Smith, besides several others to guide, or, as was often the case, to misguide him.

There is no doubt that this is a beautiful book, well up to the high standard of the Hakluyt Society. To the serious historian it is more significant, so the editors point out, 'as evidence of the attitude and interest of a group of expansionists bent upon promoting colonization overseas than it is as an eye-witness account of events in Virginia.'

To those who, like this reviewer, approach every book connected with early Virginia history rather as Keats must have approached Trojan history after reading Chapman's Homer, this book is delightful for the old memories it revives in its quaint Elizabethan formal style of Powhatan and Pocohontas, of Weroances and Oholasc, Queen of Quiyoughcohanock; of 'One Savadge', for instance, 'hunting alone vying the skyn of a deare, slit on the one syde, and so put vpon his arme through the neck, in that sort that the hand comes to the head, which is stuffed, and the Hornes, Head, Eyes, Eares, and every part as arteficially Countourfeyted as they can devise, thus shrowding his body in the skyn, by stalking he approacheth the deare, creeping on the grownd from one tree to another, yf the deare chaunce to fynd fault or stand at gaze, he turneth the head with his hand to the best advantage to wyn his shoot, having shott him, he chaseth him by his blood and strayne till he gett him'.

JOHN USBORNE

CHESAPEAKE BAY: A PICTORIAL MARITIME HISTORY. By M. V. BREWINGTON. Cornell Maritime Press, Cambridge, Maryland, U.S.A. 9 x 12 inches. \$6.50.

Chesapeake Bay is the largest and most interesting inlet on the East coast of the United States of America, and the bay in which the first colonists from England dropped anchor. They took with them the pre-fabricated parts of a barge for assembly on arrival, thus founding the ship building industry in the Bay country. During the centuries since practically every type of craft has been built there.

In his book *Chesapeake Bay; a Pictorial Maritime History* Mr Brewington has selected over 260 photographs covering this history and showing a great variety of vessels, methods of building, views of ship-yards, equipment, tools, as well as their uses, fishing, trade, sport and piracy.

A number of very fine sailing ships have been built in the yards in Chesapeake Bay, and in 1830 perfection was reached when the Baltimore Clipper type of hull was introduced. In 1810 the first steamship was constructed, and in 1952 the United States liner *United States* was launched at Newport News.

Amongst native craft there is an interesting variety of hull types and rig, many quite unorthodox, which have been seen on the waters of the Bay. This is due to the need for keeping costs down and consequently simplicity of design. The classification of these craft is interesting and includes such names as skiffs, bugeyes, brogans, pungys, to a steamboat described as having 'a V-bottom hull, with rounded stern like the back end of a Chippendale claw foot bath tub'.

There are in all fourteen subject-headings, each with a brief introduction and historical notes

preceding the series of illustrations. Mr Brewington is to be congratulated on cramming so much interesting information within the one volume of 230 pages. A chart of the Chesapeake and Delaware Bays forms the end papers. The author is a member of the Society for Nautical Research, editor of the *American Neptune*, author of books on Chesapeake Bay craft, and possesses the largest collection of the Bay's antiquities.

B. LAVIS

CATALOGUE OF THE HENRY HUDDLESTON ROGERS COLLECTION OF SHIP MODELS. United States Naval Institute, 1954. $7 \times 10\frac{1}{4}$ inches; 117 pages; 109 illustrations. Cloth \$2. Paper \$1.50.

In the days of the great American 'boom' in ship-models, roughly the decade following the first Great War, Col. Rogers was probably the most successful collector, his greatest triumph being the acquisition in 1922 of the models at Cuckfield Park, once the property of Charles Sergison, Secretary of the Navy Board from 1690 to 1719. When Col. Rogers died in 1935, he left his entire collection to the U.S. Naval Academy at Annapolis; the present book is a very well-illustrated catalogue of its 108 items.

Unfortunately, Col. Rogers was one of those collectors who like their possessions to look perfect, however much restoration this may entail. If decoration or even large parts of a model are missing, they must be supplied, even when there is nothing to show how this should be done. The photographs in this catalogue show the disastrous results of such a policy, with models given new sterns, heads or quarter-galleries based on little or no evidence and 'faked' so skilfully that even the compiler of the catalogue seems to have been deceived. The case of model no. 107, described in the *M.M.* in 1941 (p. 169) is bad enough, but it does not stand alone by any means. No 2 has an almost completely new stern; no. 14 has suffered both additions and removals; no. 32 has a new stern and a new head as well.

The worst example of all is provided by no. 72, where a model of a 90-gun ship of about 1720 has been given stern-decoration and quarter-galleries copied exactly from another model in Boston, said—wrongly in my opinion—to represent the *Royal George* of 1715. As if this were not enough, the resulting hybrid is catalogued as the *Royal George* of 1756, a ship whose appearance is well known and can be said to differ from the model in almost every detail.

Many of the earlier models have been rigged since their arrival in America and it is evident that this has been very well done, but there is certainly an over-dose of bobstays. I think I am right in saying that the bobstay has not yet been traced back before 1690, and yet we find it here on models of c. 1680, 1679 and even on one claimed as Cromwellian. Similarly, on model no. 25, which is said to be the *Duke* of 1739, we find the double dolphin striker of 1800 or later; even if the model dates from the last days of the ship, the rigging must be quite 25 years out of date.

A few corrections on matters of fact need to be made. There is no justification for the statement (no. 39) that there is a model of the 1719 *Royal William* in the National Maritime Museum lent by me; actually there are three models of this ship, but none has ever passed through my hands. No. 37, described as a British 'frigate-built corvette' of about 1715, is said to have come from the Sergison collection, but did not. I can be positive on this question, because the Sergison models were actually in my charge when Col. Rogers bought them. On the other hand, one model which did belong to the Sergison collection does not appear in the present catalogue; this is the 54-gun ship of about 1710 shown in plate 64*b* and 65*c* of Nance's *Sailing Ship Models*.

It can be said with confidence that no. 69 is very much later than 1695; it looks, if anything, later than no. 54, which is ascribed to the middle of the eighteenth century. It can also be said that no. 39 is not the *Royal William* of 1692, as stated, but the ship of 1719; the dimensions given are actually those of the later ship. Again the dimensions given for the *Grafton* (no. 32) are those of the ship of 1700, whereas the identification depends on the connection with George Legge, first Lord Dartmouth, and makes it certain that it is the ship of 1679 which is represented.

Some of these criticisms may seem unnecessarily severe. The present owners of this magnificent collection cannot be blamed for what was done to some of the models before they

came into their possession. As it is, they have given us an excellent record of the collection as it stands; what needs doing is to investigate its past history and distinguish between the genuine and the reproduction.

At the same time some of the historical notes should be revised. For instance, no. 76 is catalogued as the 80-gun *Révolutionnaire* of about 1775 and we are told that this ship was captured from the French at the 'Glorious First of June', when she was carrying 110 guns. Actually the *Révolutionnaire*, which had been built in 1766 as the *Bretagne* 110, was not present at that battle; she had been disabled in the fighting of 28 May and had gone off to Brest. Another *Révolutionnaire* was taken in the following October, but this was a new 40-gun frigate, even less like the model than her 3-decked namesake must have been.

R. C. ANDERSON

THE MEMOIRS OF A BUCCANEER. Edited by G. ALAUX and A. T'SERSTEVENS and translated by MALCOLM BARNES. Allen and Unwin, 1954. $8\frac{3}{4} \times 6$ inches; 235 pages. 12s. 6d.

In the introduction to this book one of its editors explains that it is composed of extracts from a manuscript written, probably at the end of the seventeenth century, by an untraced retired filibuster and brought to light only by the destruction of a walled-up cellar in St Malo during the last war. As arranged in this volume, the manuscript contains little of historical or maritime interest. Le Golif, Captain of Buccaneer, has some fairly amusing tales to tell about life among the Brothers of the Coast in the Caribbean, but his self-conceit appears to have led him to concentrate over-much on his own triumphs of arms and of dissipation. The book is therefore too slight to be considered as anything but entertainment. Which, after all, is presumably what the editors intended it to be.

GILLIAN GREENHILL

THE NAUTICAL CHART OF 1424 AND THE EARLY DISCOVERY AND CARTOGRAPHICAL REPRESENTATION OF AMERICA. A STUDY ON THE HISTORY OF EARLY NAVIGATION AND CARTOGRAPHY. By A. CORTESÃO. Coimbra University Press, 1954. $15\frac{1}{2} \times 12$ inches; xx + 123 pages; 20 plates and sketch-maps. Price 700 Escudos (25 dollars), in wrappers, with case, or 850 Escudos (30 dollars), specially hand-bound, with case. (Obtainable through Messrs Maggs Bros. and Messrs Robinson Bros., in London.)

The nautical chart from the famous Phillipps collection which is described and discussed in this work, is dated 22 August 1424, and drawn on a sheet of parchment measuring 22×35 in. at its greatest dimensions. It is remarkably well preserved, but its execution is not outstanding, as can be seen from the superb reproduction in colour which forms the frontispiece. It represents the North Atlantic, as it was then known, with the coastal outlines of the British isles (130 place-names), continent of Western Europe (293 names), N.W. African coast (84 names), and the Atlantic islands (36 names). The scale is roughly 1:6,500,000. In view of its provenance, its genuineness seems to be assured, although the maker's name has been tampered with at some time. The great importance of this chart lies in its representation, for the earliest time in any surviving chart, of a group of four large islands, the largest of which is called *Antilia*, and the other three, *Saya*, *Satanazes* and *Ymana*, in the westernmost part of the Atlantic.

After giving a full description of the chart and a list of the place-names, together with their modern equivalents (in so far as they can be identified), Dr Cortesão discusses the 'riddle of the chart maker', tentatively ascribing the authorship to a member of the Pizigano family of Venetian cartographers. He then reviews the evidence for voyages of discovery in the Atlantic before the late Middle Ages, leaning strongly to the theory that the Phoenicians may have voyaged as far as the West Indies, or even the American continent itself. He endeavours to show that traces of these

voyages (and of subsequent ones by the Carthaginians and others) survived in the tales of Atlantis, the island of the seven cities etc., which probably embodied some elements of fact among much legendary and fantastic accretion. He marshals the evidence for positive knowledge of the Atlantic islands before 1424 in a way which, while it will not convince all his readers, will probably impress them.

Passing to the priority of the name and cartographical representation of Antilia, he points out that the Pizigano world-map of 1367 does not mention Antilia; and he agrees with W. Ruge that the Weimar chart, which does, should be dated 1460-9, and not 1424 as other authorities have argued. He then discusses the origin of the name Antilia and the nomenclature and cartographical representation of the group in general. He tries to prove that the word Antilia is of Portuguese origin, but this (pp. 67-70) seems to the reviewer to be the weakest section of his book. His flat statement (p. 68) that 'Antilia or Antilla is definitely composed of two Portuguese words' (*ante*, and *ilha* in the old form of *ilia*, *illia*), would be more convincing if he could adduce some stronger philological evidence, or even one other instance of the employment by the Portuguese of this word in the fifteenth century. The arguments that the word *Satanazes* refers to the American Indians (pp. 74-7) also seem rather far-fetched; but the nomenclature of the group in general on the 1424 and subsequent charts is very baffling, and all deductions are highly conjectural. Dr Cortesão is a convinced adherent of Portuguese priority in the discovery of America, but it is significant that he makes no allusion to Professor Samuel Morrison's standard work in this field. In the penultimate chapter, the author comes to the heart of his matter by trying to show that the Antilia group of islands in the 1424 chart should be regarded as the forefront of Eastern America—either as a part of the West Indies or even a portion of the continent.

He has an interesting discussion on the association of Antilia with the legendary island of the seven cities, although he may be rather rash in averring that the seven unidentifiable names on Antilia in the 1424 chart 'obviously' correspond to the seven cities of the legend. His theory that first the Phoenecians and in due course the Portuguese crossed the Atlantic to the West Indies is summarized as follows (p. 108): 'Between the Canaries and Madeira there is a belt of calms and variable winds where the prevailing trades blow from the north-east, the most frequent ones reaching great force. If a ship fitted only with round sails and without other means of sailing against strong head winds is caught by a storm in this region, she runs every chance of being impelled southwards until reaching the belt south of the Sargasso Sea, where the trades which blow exclusively from the eastern quarters of the compass and the increasingly strong northern equatorial current would thrust her irresistibly towards the Antilles. Then prevailing circulatory winds and currents would bring the ship to the Azores or the coasts of Portugal. This is known to have happened to many ships.'

It may have been so, and the Antilia group of 1424 may represent some part of America, but, as Dr Cortesão admits in his introduction (p. 3): 'I fear that general agreement will never be reached on this controversial question. . . . I do not pretend, therefore, that the conclusions at which I shall arrive will convince everybody.' Whether convinced or not, all students of cartography will be grateful to Dr Cortesão for the elaboration of this learned monograph which is lavishly illustrated, beautifully produced and admirably indexed. All those who have Nordenskiöld, HARRISSE, Henig, Vignaud, etc., on their shelves should not fail to add this noble production of the Coimbra University Press.

C. R. BOXER

SUBSÍDIOS PARA A HISTÓRIA MILITAR MARÍTIMA DA ÍNDIA (1585-1669), Vol. III, 1618-1635. By Vice-Admiral (Rtd.) A. BOTELHO DE SOUSA, Lisboa, Imprensa da Armada, 1953. 9 × 6 inches; 645 pages.

The previous two volumes of this painstaking work, covering the years 1585-1617, were reviewed in the *M.M.* for October 1930, pp. 430-2, and Vol. 35, pp. 159-60 (1949), respectively. The principal naval events recorded in the present volume are the siege and capture of Ormuz by an

Anglo-Persian force in 1622; the valiant efforts of Rui Freire de Andrade and Nuno Alvares Botelho to stem the tide of adversity and defeat, in which they were for a while successful; the operations of the Anglo-Dutch 'fleets of defence' against their Iberian opponents from Japanese to East African waters, including the hard-fought actions in the Persian Gulf (1625); the siege of Malacca by the Achinese and its relief by Nuno Alvares Botelho in 1629, which was the last great naval victory of the Portuguese in Asia; and the increasingly effective blockade of the straits of Malacca by the Dutch which was to culminate in the fall of that key-fortress six years later.

Apart from contending with vastly superior Dutch and (to a lesser extent) English naval forces the Portuguese had to face sporadic revolts in Ceylon, East-Africa and elsewhere, which often gave them much trouble. Save for a period in 1625-7, and again in 1635-9, the Portuguese never had sufficient naval strength to challenge their enemies seriously at sea, nor did they always make the best use of such resources as they had. They continued to rely largely on lightly gunned but highly manoeuvrable craft, such as *fustas* (foists) and *galiotas* (galliot), which was a cardinal blunder. These oared vessels were 'as much to be feared as so many butterflies' in a fight against well-gunned Dutch or English East-Indiamen, in normal circumstances. Between 1629 and 1636, nearly 150 Portuguese vessels of this type were taken or destroyed by Dutch cruisers, mostly in the straits of Malacca or off the coast of Malabar. Admittedly, the Portuguese were to some extent forced to rely on such inferior craft (manned mainly by Lascars, Gujaratis and Negroes) since they could seldom find sufficient European seamen and gunners to man the galleons and carracks of their high-seas fleet or *armada de alto-borde*. Their man-power problem was aggravated by the fact that many of the men who were shipped out to India to serve in the Eastern armadas, joined one or another of the Religious Orders on their arrival at Goa, since the Church fed and maintained her men so much better than did the Crown (pp. 12-15, 344-5, 501-2, 532-4, 625).

Vice-Admiral Botelho de Sousa has, as usual, done his work methodically and well, besides being conspicuously fair to the Dutch and English opponents of the Portuguese. The numerous extracts which he gives from the unpublished series of the *Livros das Monções* or Books of the 'Monsoons' (the official correspondence between Lisbon and Goa), form the most valuable part of his book. This was already in the press when two other works appeared containing much relevant material, which students of the struggle for the mastery of the Eastern Seas should not fail to consult: Professor W. P. Coolhaas's edition of *Jan Pietersz Coen. Bescheiden omtrent zijn bedrijf in Indië*, reviewed elsewhere in this number, and Pandit P. Pissurlencar's annotated publication of the *Assentos do Conselho do Estado [da India]*, of which two volumes have so far appeared, covering the years 1618-43 (Goa, Imprensa Nacional, 1953-4). Botelho de Sousa's own work is excellently printed, but (as with previous volumes), there are neither indices nor sketch-maps, two very serious omissions in a work of this kind.

C. R. BOXER

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